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Vulvodynia / Vulvovaginal Pain

Medical and physical predictors of localized provoked vulvodynia.
Bohm-Starke N
Acta Obstet Gynecol Scand. 2010 Dec;89(12):1504-10

Vulvodynia in young women is a significant clinical challenge. This overview focuses on localized provoked vulvodynia (LPV) with regard to medical and physical predictors of the condition. Several causative factors have been proposed and one major conceptual issue is the role of inflammation. Trauma to the vestibular mucosa causes an initial inflammatory response which may result in peripheral and central pain sensitization. In women with LPV, evidence of mucosal nerve fiber proliferation and enhanced systemic pain perception has been found. A dysfunction of the pelvic floor muscles is common and many patients also suffer from other bodily pain. In general, the level of scientific quality in published studies on vulvodynia is low. Further research on epidemiology, etiology and conduction of clinical trials with high evidence grade is desired.

Surgical treatment of vulvar vestibulitis: a review.
Tommola P, Unkila-Kallio L, Paavonen J
Acta Obstet Gynecol Scand. 2010 Nov;89(11):1385-95

Vulvar vestibulitis syndrome, a subset of vulvodynia, is a complex pain syndrome. It causes severe dyspareunia and affects mainly young women. The etiology is unknown and no uniformly effective treatment exists. Surgery has been considered as 'the last resort' in the management of patients not responding to conservative treatment modalities. For this review, all studies of surgical treatment of vulvar vestibulitis were evaluated. We describe the evolution of vestibulectomy techniques through the years. Our aim was also to find out whether any

surgical technique is better than others providing better patient satisfaction and lower complication rates. We conclude that surgical technique as such plays a relatively small role. Surgery seems to be effective. However, lack of randomized trials and insufficient data on complication rates must be emphasized.

Vulvodynia: new concepts and review of the literature.
Groysman V
Dermatol Clin. 2010 Oct;28(4):681-96

Vulvodynia is a multifactorial chronic pain disorder that is distressing to the patient and exigent to the physician. Although the condition is common, it remains little understood, so patients remain undiagnosed and untreated or undertreated for many years. Although multiple therapies exist in the treatment of vulvodynia, few randomized controlled clinical trials have been performed. Thus, treatment should be individualized and tailored to a patient's diagnosis, symptoms, and psychosexual functioning. Patient education is also important and is facilitated by patient brochures providing assurance that vulvodynia is a real disease.

Approach to the diagnosis and treatment of vulvar pain.
Danby CS, Margesson LJ
Dermatol Ther. 2010 Sep-Oct;23(5):485-504

Vulvar pain is a common problem, affecting up to 16% of women. The pain and discomfort seriously impacts their quality of life, and is compounded by the increasing frustration encountered in their search for appropriate medical advice. Their pain can be localized or generalized, constant or intermittent, with or without visible changes. For practitioners, the correct diagnosis and treatment of vulvar pain is a challenge. There is an extensive differential diagnosis, from problems that are simple and immediately visible to those that are much more complex and truly invisible. This review provides an approach to the diagnosis of vulvar pain. It outlines the wide range of etiologies for vulvar pain, and provides details of the most vexing in a comprehensive look at vulvodynia, including definition, theory, diagnosis, and therapy.

Vulvodynia: an evidence-based approach to medical management.
Andrews JC
JCOM Vol. 17, No. 5 May 2010
http://www.turner-white.com/memberfile.php?PubCode=jcom_may10_vulvodynia.pdf

Objective: To present key concepts in the diagnosis and treatment of vulvodynia. Methods: Review of the literature with case presentations. Results: Vulvodynia is a condition of vulvar discomfort that affects millions of women each year. The etiology is unknown. Treatment goals are to reduce pain, improve quality of life, and recover sexual function if it has been affected. There is no single effective treatment for vulvodynia, and there is no high-quality evidence of

beneficial effect for any intervention. Rapid resolution of symptomatic chronic vulvodynia is unusual and improvement of pain may take months. Conclusion: The quality of evidence for efficacy for pain relief and for sexual function ranges from none to fair. In the absence of good quality evidence, providers and patients must discuss available evidence and make choices that are not based on confident recommendations.

Vulvodynia and chronic pelvic and perineal pain.
[Article in French]
Moyal-Barracco M, Labat JJ
Prog Urol. 2010 Nov;20(12):1019-26

OBJECTIVE: To define vulvodynia and to describe the main approaches to treatment. MATERIAL AND METHODS: Review of the literature concerning vulvodynia. RESULTS: Vulvodynia is defined as chronic vulvar discomfort, usually with a burning nature, with no relevant clinical lesions and no clinically identifiable neurological lesion. Localized provoked vulvodynia essentially affects young women and is responsible for major sexual and psychological repercussions. Treatment consists of local anaesthetics, drugs used to treat neuropathic pain, physiotherapy and psychotherapy. Vestibulectomy is only very rarely indicated. CONCLUSION: Many unknowns persist especially concerning the aetiology of vulvodynia. Evaluation of symptoms and treatment have not been clearly defined. However, symptomatic management provide satisfactory long-term results.

Clitoral and vulvar vestibular sensation in women taking 20 mcg ethinyl estradiol combined oral contraceptives: a preliminary study.
Lee M, Morgan M, Rapkin A
J Sex Med. 2010 Oct 18. [Epub ahead of print]

Introduction. Many women taking low-dose (20 mcg) oral contraceptive pills (OCPs) complain of decreased libido and arousal and some develop vulvar vestibular pain and dyspareunia. Free testosterone concentrations are decreased by the OCP. Genital sensation has not been objectively measured in women taking OCPs. Aim. We assessed whether the 20 mcg ethinyl estradiol combined OCP and associated decrease in free testosterone levels affected genital sensation in a pilot study of a group of asymptomatic OCP users and controls. Methods. Clitoral thermal, vibratory, and vestibular pain thresholds, sexual functioning, and free testosterone levels were measured in 24 women taking 20 mcg ethinyl estradiol combined OCPs and 28 comparison women not using hormonal contraception. Main Outcome Measures. Female Sexual Functioning Index (FSFI), free testosterone, and clitoral heat, cold, and vibratory thresholds for sensation and vestibular pain thresholds. Results. Free testosterone levels were lower in OCP users. There were no differences in FSFI scores, clitoral thermal or vibratory thresholds, or vestibular pain thresholds between groups. Conclusions. Low-dose (20 mcg) oral contraceptives decrease free testosterone but are not associated with alterations in clitoral or

vestibular sensation. Further studies of genital sensation in women with OCP-related sexual dysfunction are warranted.

The role of a leaky epithelium and potassium in the generation of bladder symptoms in interstitial cystitis/overactive bladder, urethral syndrome, prostatitis and gynaecological chronic pelvic pain.
Parsons CL
BJU Int. 2010 Dec 22 [Epub ahead of print]

The traditional diagnosis of interstitial cystitis (IC) only recognizes the severe form of the disease. The far more common early and intermittent phases of the disease are not perceived to be part of IC but rather are misdiagnosed as urinary tract infection, urethral syndrome, overactive bladder, chronic prostatitis, urethritis, or a type of gynecologic pelvic pain (such as endometriosis, vulvodynia, or some type of vaginitis). All of these patient groups actually suffer from the same bladder disease. This disease results from a leaky bladder epithelium and subsequent potassium leakage into the bladder interstitium that generates the symptoms of frequency, urgency, pain or incontinence in any combination. Robust scientific data now support this important concept. These data will be reviewed herein. The conclusions derived from these data substantially alter the paradigms for urology and gynecology in the generation of frequency, urgency and pelvic pain. All the above-mentioned syndromes unite into one primary disease process, lower urinary dysfunction epithelium, or LUDE disease, and not the 10 plus syndromes traditionally recognized.

Global approach to chronic pelvic and perineal pain: from the concept of organ pain to that of dysfunction of visceral pain regulation systems.
[Article in French]
Labat JJ, Riant T, Delavierre D, Sibert L, Watier A, Rigaud J
Prog Urol. 2010 Nov;20(12):1027-34

OBJECTIVE: Analysis of complex pelvic and perineal pain. MATERIAL AND METHODS: Review of the literature concerning the various types of functional pelvic pain. RESULTS: Various forms of pelvic pain are frequently associated: painful bladder syndrome (interstitial cystitis), irritable bowel syndrome, endometriosis pain, vulvodynia, chronic pelvic pain syndrome (chronic prostatitis). Pelvic pain is often associated with fibromyalgia or complex regional pain syndrome (reflex sympathetic dystrophy). The pathophysiological mechanisms involved in these syndromes are all very similar, suggesting a triggering element, neurogenic inflammation, reflex muscular and autonomic responses, central hypersensitization, emotional reactions and biopsychosocial consequences. DISCUSSION: The concept of visceral pain is evolving and, in practice, complex pelvic pain can comprise neuropathic components, complex regional pain syndrome components, hypersensitization components, and emotional components closely resembling posttraumatic stress syndrome. CONCLUSIONS: When pain cannot be explained by an organ disease, the pain must be considered to be expressed via this organ. Chronic pelvic

and perineal pain can become self-perpetuating and identification of its various mechanisms can allow the proposal of individually tailored treatments.

Management of chronic pelvic pain.
Benjamin-Pratt AR, Howard FM
Minerva Ginecol. 2010 Oct;62(5):447-65

Chronic pelvic pain (CPP) is a common complaint of women presenting for gynecologic and primary care. Evaluation of CPP requires obtaining a careful history including not only obstetrical and gynecologic information but also screening for gastrointestinal, urologic, musculoskeletal, and neurological disorders. A detailed physical examination is also necessary. Management of CPP depends largely on the cause. Gynecologic causes include endometriosis, pelvic inflammatory disease, adhesive disease, pelvic congestion syndrome, ovarian retention syndrome, ovarian remnant syndrome, adenomyosis, and leiomyomas. Some non-gynecologic causes are interstitial cystitis/painful bladder syndrome, irritable bowel syndrome, pelvic floor tension myalgia, and abdominal myofascial pain syndrome. Treatments may be directed toward specific causes or may be targeted to general pain management. The most effective therapy may involve using both approaches. The diagnosis and treatment of each of the above disorders, and the management of CPP itself, is discussed.

Pelvic sexual pain.
[Article in French]
Sibert L, Safsaf A, Rigaud J, Delavierre D, Labat JJ
Prog Urol. 2010 Nov;20(12):967-72

OBJECTIVE: To colligate the clinical and ethiopathogenical elements to take into account in the assessment of sexual activity-related chronic pelvic and perineal pain, in the male as well as in the female subject. SUBJECTS AND METHODS: Review of articles and consensus conferences published on this subject in the Medline (Pubmed) database, selected according to their scientific relevance. RESULTS: In the female subject, only dyspareunia has benefitted from a consensual definition. Deep dyspareunia must start investigations in search of pelvic organs disorders, endometriosis, painful bladder syndrome adhesions. Superficial dyspareunia can be a part of provoked vestibulodynia. Vaginismus can be linked to a local disorder, but can also be caused by an excess of nociception. In the male subject, painful ejaculation must start investigation in search of a local urological disorder. It can also be of iatrogenous origin, or be included in a chronic pelvic pain syndrome. Although less documented, other pelvic and perineal pain syndrome, coitus-related or not, exist in the male subject. CONCLUSION: Assessment of these sexual dysfunctions is primarily based on history taking and clinical examination. In the absence of systematically researched organic disorder, these pains can be part of functional disorders, in which case a global assessment must be undergone, by taking into account all aspects of the pain, including emotional aspects.

Diagnostic algorithms for chronic pelvic and perineal pain: from symptoms to syndromes.
[Article in French]
Rigaud J, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1035-43

INTRODUCTION: Patients with chronic pelvic and perineal pain often report diffuse, poorly systematized symptoms and the aetiological work-up can often be difficult. The purpose of this article is to propose a series of diagnostic algorithms to facilitate the aetiological work-up of chronic pelvic and perineal pain. MATERIAL AND METHODS: A review of the literature was performed by searching PubMed for articles on chronic pelvic and perineal pain. Diagnostic algorithms were established by starting with symptoms to define syndromes. RESULTS: Algorithms were established for the various types of chronic pain: perineal pain, bladder pain, epididymotesticular pain, urethral pain, vulvar pain, inguinal pain, male dyspareunia, female dyspareunia and diffuse pelvic and perineal pain. A clinical assessment and complementary investigations were proposed for each algorithm to establish an aetiological diagnosis. CONCLUSION: The proposed algorithms are designed to be a clinical aid and do not constitute a comprehensive diagnostic approach to chronic pelvic and perineal pain.

Treatment algorithms for the management of chronic pelvic and perineal pain: from syndrome to treatment.
[Article in French]
Rigaud J, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1132-8

INTRODUCTION: The treatment of patients with chronic pelvic and perineal pain is often complex and involves a number of different parameters. The purpose of this article is to propose a series of treatment algorithms to facilitate the therapeutic management of patients with chronic pelvic and perineal pain. MATERIAL AND METHODS: A review of the literature was performed by searching Pubmed for articles on treatment of chronic pelvic and perineal pain. Treatment algorithms were established for each type of pain syndrome. RESULTS: Treatment algorithms were defined for the various types of chronic pain syndrome: pudendal nerve entrapment syndrome, chronic pelvic pain syndrome, painful bladder syndrome, vulvar pain syndrome, epididymotesticular pain syndrome, complex pelvic pain syndrome. Therapeutic management is proposed for each algorithm. CONCLUSION: The proposed algorithms are designed to be a clinical aid and do not constitute a comprehensive approach to the management of patients with chronic pelvic and perineal pain.

Symptomatic approach to chronic neuropathic somatic pelvic and perineal pain.
Labat JJ, Robert R, Delavierre D, Sibert L, Rigaud J
Prog Urol. 2010 Nov;20(12):973-81

OBJECTIVES: To determine the characteristics of neuropathic pain and the somatic nerve lesions most frequently encountered in the context of chronic pelvic and perineal pain. MATERIAL AND METHODS: Review of the literature devoted to pelvic and perineal neuralgia. RESULTS: The diagnosis of pelvic and perineal pain related to a somatic nerve lesion is essentially clinical. The topography of the pain and its characteristics (burning, paraesthesia, etc.) can help to link the pain to the neurological territory involved. Complementary investigations are poorly contributive. Two main systems are involved in this region: sacral nerve roots that give rise to the pudendal nerve and the posterior cutaneous nerve of the thigh, thoracolumbar nerve roots that give rise to the ilioinguinal, iliohypogastric, genitofemoral and obturator nerves. The first system is essentially perineal and the second is essentially anterior inguinoperineal. DISCUSSION: Pudendal neuralgia is the most common and most disabling form of pelvic pain. It presents as unilateral or bilateral burning pain of the anterior or posterior perineum that is worse on sitting and relieved by standing, not usually associated with night pain. It is related to a ligamentous nerve compression mechanism. Inferior cluneal neuralgia tends to be experienced as ischial and lateroperineal pain, and is sometimes accompanied by pain in a truncated sciatic territory, corresponding to projections of the posterior cutaneous nerve of the thigh. This neuralgia can be related to a piriformis syndrome or an ischial lesion. Sacral nerve root lesions do not cause acute pain, but are accompanied by sacral sensory loss and urinary, anorectal or sexual disorders. Pain related to ilioinguinal, iliohypogastric and genitofemoral nerves is generally secondary to surgical trauma and scars. Although these various lesions are sometimes difficult to distinguish from each other, an essential part of management consists of performing a local anesthetic block at the trigger point detected in the scar. Referred pain derived from the spinal cord due to thoracolumbar painful minor intervertebral dysfunction is experienced in the inguinal region, pubis, labium majorum and sometimes the trochanter, and only a complete clinical examination of the thoracolumbar region can demonstrate local signs (posterior facet joint pain at several levels, fibromyalgia).

Symptomatic approach to chronic pudendal pain.
[Article in French]
Labat JJ, Delavierre D, Sibert L, Rigaud J
Prog Urol. 2010 Nov;20(12):922-9

INTRODUCTION: Pudendal neuralgia is a recently identified and now clearly recognized clinical entity. This chronic disabling pain is due to a pelviperineal tunnel syndrome. MATERIAL AND METHODS: Review of the literature based on a Medline search of articles devoted to this subject. RESULTS: The diagnosis is purely clinical, based on simple consensual criteria (Nantes Criteria): pain situated in the anatomical territory of the pudendal nerve, worse on sitting, not usually waking the patient at night, not accompanied by any objective perineal sensory loss with a positive anaesthetic block of the pudendal nerve at the ischial spine. CONCLUSION: The diagnosis of pudendal neuralgia is straightforward when the patient's symptoms remain confined to these diagnostic criteria, which are all essential for the diagnosis. However, the patient often presents associated urinary, anorectal, sexual, neuromuscular and

hypersensitization signs, which can complicate the diagnostic approach and therapeutic management.

Drug treatments in the therapeutic management of chronic pelvic and perineal pain.
[Article in French]
Riant T, Rigaud J, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1095-102

INTRODUCTION: Chronic pelvic and perineal pain is a common compliant due to a wide range of causes. The treatment strategy obviously depends on the identified aetiologies, which constitute the main target of treatment. However, pain often becomes self-perpetuating with time, generating and feeding on the social and functional consequences, resulting in a specific disease: chronic pain or pathological pain. OBJECTIVES: To define the place of drug treatment in the management of chronic pelvic and perineal pain. METHODS: Review of the literature devoted to drug treatments. RESULTS: Drugs have an inevitable place in the treatment strategy, but their role is poorly known and they are rarely completely effective. Drugs can only be part of the treatment of these syndromes and can only be prescribed in the context of a predefined strategy. Other treatment modalities are also available and often essential: physiotherapy, global management, TENS (transcutaneous electrical nerve stimulation), surgery, neuromodulation (peripheral, spinal cord, cortex stimulation, intrathecal infusion). As in chronic neuropathic pain, the analgesic drugs proposed in chronic pelvic and perineal pain mainly consist of tramadol, antidepressants and antiepileptics. CONCLUSION: The limited number of specific randomized clinical trials, the sometimes insufficient efficacy of drug treatments, associated with significant adverse effects, the very disabling nature of this disease, and the frequent need for off-label prescription indicate the need for effective multidisciplinary management.

Pudendal nerve surgery in the management of chronic pelvic and perineal pain.
[Article in French]
Robert R, Labat JJ, Khalfallah M, Louppe JM, Riant T, Hamel O
Prog Urol. 2010 Nov;20(12):1084-8

OBJECTIVE: To define the place of pudendal nerve surgery in pudendal nerve entrapment syndromes. MATERIALS AND METHODS: Description of the various surgical techniques and published results. RESULTS: The original surgical technique, which remains the reference technique, consists of performing surgical release of the pudendal nerve from the infrapiriformis foramen to Alcock's canal via a transgluteal approach. This surgical procedure is safe and gives encouraging results validated by a prospective, randomized protocol: 66 to 80% of patients are improved. Other transvaginal or transperineal approaches have also been proposed. CONCLUSION: Pudendal nerve surgery is a reasonable treatment option when all other treatments have failed. However, the various techniques proposed and their respective criticisms must be carefully evaluated.

Sympathetic nerve block in the management of chronic pelvic and perineal pain.
[Article in French]
Rigaud J, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1124-31

INTRODUCTION: The autonomic sympathetic nervous system conveys nociceptive messages from the viscera to the brain. The purpose of this article is to review the place of autonomic nerve blocks in the management of chronic pelvic and perineal pain. MATERIAL AND METHODS: A comprehensive review of the literature was performed by searching PubMed for articles on autonomic nerve blocks and related procedures in the management of chronic pelvic and perineal pain. RESULTS: Intervention on the sympathetic nervous system for the management of chronic pelvic and perineal pain has been proposed at main three levels: ganglion Impar, hypogastric plexus and L2 lumbar sympathetic blocks. Infiltration of the sympathetic nervous system with local anaesthetic constitutes a diagnostic test by providing pain relief for the duration of action of the local anaesthetic in two third of patients. Specific procedures have been performed such as alcohol nerve block, radiofrequency ablation, surgical section or botulinum toxin infiltration at these various sites to achieve more lasting results. CONCLUSION: A sympathetic nervous system test block plays a diagnostic role in the management of chronic pelvic and perineal pain by guiding more specific global pain management procedures.

Somatic nerve block in the management of chronic pelvic and perineal pain.
[Article in French]
Rigaud J, Riant T, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1072-83

INTRODUCTION: Chronic pelvic and perineal pain can be related to a nerve lesion caused by direct or indirect trauma or by an entrapment syndrome, which must then be demonstrated by a test block. The purpose of this article is to review the techniques and modalities of somatic nerve block in the management of chronic pelvic and perineal pain. MATERIAL AND METHODS: A review of the literature was performed by searching PubMed for articles on somatic nerve infiltrations in the management of chronic pelvic and perineal pain. RESULTS: Nerves involved in pelvic and perineal pain are: thoracolumbar nerves (obturator, ilioinguinal, iliohypogastric and genitofemoral) and sacral nerves (pudendal and inferior cluneal branches of the posterior cutaneous nerve of the thigh). Infiltration has a dual objective: to confirm the diagnostic hypothesis by anaesthetic block and to try to relieve pain. Evaluation of the severity and site of the pain before and immediately after the test block is essential for interpretation of the block. The various infiltration techniques for each nerve are described together with their respective advantages, disadvantages and risk of complications. CONCLUSION: Somatic nerve blocks are an integral part of the management of chronic pelvic and perineal pain and are predominantly performed under CT guidance in order to be as

selective as possible. Once the diagnosis and the level of the nerve lesion have been defined, more specific therapeutic procedures can then be proposed.

Electrophysiological studies of chronic pelvic and perineal pain.
[Article in French]
Labat JJ, Delavierre D, Sibert L, Rigaud J
Prog Urol. 2010 Nov;20(12):905-10

OBJECTIVE: To describe electrophysiological studies, what they investigate, and their contribution and limitations in the assessment of pelvic and perineal pain. MATERIAL AND METHOD: Description of the electrophysiological techniques generally used to evaluate somatic nerves of the pelvic and perineal region (analytical electromyography, nerve conduction velocities, reflexology), their applications and the difficulties of interpretation. RESULTS: Electrophysiological studies can demonstrate signs in favour of peripheral neuropathy, specify the axonal and/or demyelinating type of lesion, and provide topographic arguments on the type of trunk or nerve root involved (pudendal nerve, sacral nerve roots, ilioinguinal or iliohypogastric nerve, genitofemoral nerve, obturator nerve). CONCLUSION: Electrophysiological studies require a technically skilled operator and can provide a better understanding of some types of pain, but are not sufficiently sensitive and specific. The conclusions of electrophysiological study reports must be closely correlated with clinical findings.

Sacral neuromodulation stimulation for IC/PBS, chronic pelvic pain, and sexual dysfunction.
Fariello JY, Whitmore K
Int Urogynecol J Pelvic Floor Dysfunct. 2010 Dec;21(12):1553-8

This study aims to review the use of sacral neuromodulation in the patient population with painful bladder syndrome/interstitial cystitis (PBS/IC), chronic pelvic pain (CPP), and sexual dysfunction. A literature review of the current research was carried out. This article highlights the current research findings and uses of sacral neuromodulation in patients with PBS/IC, CPP, vulvar vestibulitis, and erectile dysfunction. Current research on sacral neuromodulation on the abovementioned patient population has shown potential efficacy in pilot studies, though larger, multi-centered trials with long-term follow-up are needed.

A new minimally invasive technique for pudendal nerve stimulation.
T George A, Dudding TC, J Nicholls R, J Vaizey C
Colorectal Dis. 2010 Nov 5

Aim: Pudendal nerve stimulation (PNS) which is an alternative to sacral nerve stimulation requires neuro-physiological confirmation of correct siting of the electrode. We describe a modification on the existing technique where placement is assisted by guidance to the ischial

spine by a finger introduced per anum. Method: Cadaveric dissection was done to confirm the accuracy of this new approach. The surface marking of the ischial spine is marked. A stimulating needle electrode inserted through a skin incision at this point, is advanced towards the ischial spine using a finger introduced per anum as a guide. Once effective stimulation of the pudendal nerve is confirmed by observed and palpated contraction of the anal musculature, a permanent stimulating electrode is inserted and the position confirmed by radiological screening. Results: Using cadaveric studies, the correct surface markings for needle placement was confirmed. This technique was then applied successfully for in vivo insertion of the needle electrode in twenty patients with bowel dysfunction with only one lead displacement occurring over a mean follow up period of 12 months. Conclusion: Finger guided assistance of PNS electrode insertion is simple and reproducible without requiring neuro-physiological confirmation of nerve stimulation to ensure correct lead location.

Alternative approaches to sacral nerve stimulation.
Peters KM
Int Urogynecol J Pelvic Floor Dysfunct. 2010 Dec;21(12):1559-63

Bladder dysfunction is a very prevalent disorder and often refractory to behavioral and pharmacologic therapies. Sacral nerve stimulation is an approved method of managing urinary urgency, frequency, urge incontinence, and urinary retention. Alternative approaches to neuromodulation are being developed. The purpose of this paper is to describe emerging approaches to neuromodulation for voiding dysfunction. A current review of alternative methods of neuromodulation is discussed. This includes stimulation of the tibial nerve via a percutaneous approach, methods of stimulating the pudendal nerve to obtain afferent stimulation through sacral roots S2-S4, chemo-neuromodulation using botulinum toxin, and anogenital stimulation. These various methods are described and the current literature reviewed. Neuromodulation is an alternative to traditional management of voiding dysfunction. A benefit of neuromodulation is that it is minimally invasive and reversible. New sites of stimulation are being developed to add to our treatment options.

Neurostimulation techniques in the therapeutic management of chronic pelvic and perineal pain.
[Article in French]
Rigaud J, Delavierre D, Sibert L, Labat JJ
Prog Urol. 2010 Nov;20(12):1116-23

INTRODUCTION: Neuromodulation is a nonspecific analgesic treatment whose mechanism of action has not yet been elucidated. The purpose of this article is to review the techniques and results of neuromodulation in the management of chronic pelvic and perineal pain. MATERIAL AND METHODS: A comprehensive review of the literature was performed by searching PUBMED for articles on the various neuromodulation techniques used in the management of chronic pelvic and perineal pain. RESULTS: Several levels of neuromodulation

of the somatic nervous system have been evaluated in the management of pelvic pain: transcutaneous electrical nerve stimulation (TENS), percutaneous nerve stimulation (PNS), nerve root or nerve trunk stimulation, spinal cord stimulation. An improvement was obtained in an average of two thirds of cases, but with declining efficacy over time. The various studies were difficult to compare due to the heterogeneous study populations and very diverse endpoints. Interesting studies on the value of autonomic nervous system intervention have been described, but with no specific trials of neuromodulation. CONCLUSION: The place of neuromodulation in the management of patients with chronic pelvic and perineal pain has yet to be defined, as it is too frequently used as a last resort. It appears important to develop and analyse this treatment modality in large-scale, randomized, prospective studies.

Symptomatic approach to musculoskeletal dysfunction and chronic pelvic and perineal pain.
[Article in French]
Labat JJ, Guerineau M, Delavierre D, Sibert L, Rigaud J
Prog Urol. 2010 Nov;20(12):982-9

INTRODUCTION: Clinical examination of a patient with chronic pelvic and perineal pain often demonstrates muscle hypertonia or muscle contracture sometimes associated with local tenderness or real muscle trigger points. It is sometimes very difficult to determine whether this muscle pain detected on clinical examination is the cause or a consequence of the pain. The purpose of this article is to review musculoskeletal dysfunction in the context of chronic pelvic and perineal pain. MATERIAL AND METHODS: Review of the literature devoted to musculoskeletal aspects of pelvic and perineal pain. RESULTS: Definitions of pelvic floor dysfunction, hyperactive pelvic floor, myofascial pain and muscle trigger points, and the concept of fibromyalgia. CONCLUSION: Musculoskeletal pain is certainly underestimated in the management of chronic pelvic and perineal pain. The pathophysiology of musculoskeletal pain involves disorders of the lumbar, pelvic and femoral equilibrium, myofascial pain characterized by the presence of trigger points for which the pathophysiology remains controversial: a purely muscle disease, reaction to adjacent inflammatory reactions causing hypersensitization, or simply a sign of central hypersensitization in a context of chronic pain syndrome.

Treatment of the musculoskeletal component of chronic pelvic and perineal pain.
[Article in French]
Guerineau M, Labat JJ, Sibert L, Delavierre D, Rigaud J
Prog Urol. 2010 Nov;20(12):1103-10

OBJECTIVE: To describe muscle examination in patients with chronic pelvic and perineal pain and to determine the results that can be expected from specific treatments (physiotherapy and botulinum toxin). MATERIAL AND METHODS: Review of the literature, especially the Medline indexed literature. Description of the physical rehabilitation techniques that can be used in this context. RESULTS: The management of patients with chronic pelvic and perineal pain requires preliminary clinical analysis designed to identify trigger points responsible for myofascial pain,

pelvic floor muscle tension, and lumbar-pelvic-hip instability. Physiotherapy must be initiated early in the course of the disease by therapists trained in these recent techniques. Botulinum toxin injections have been shown to be effective in piriformis syndrome, but a review of the literature indicates more controversial results in the other chronic pelvic and perineal pain syndromes.

Irritable bowel syndrome, levator ani syndrome, proctalgia fugax and chronic pelvic and perineal pain.
[Article in French]
Watier A, Rigaud J, Labat JJ
Prog Urol. 2010 Nov;20(12):995-1002

OBJECTIVES: To define functional gastrointestinal pain, irritable bowel syndrome (IBS), levator ani syndrome, proctalgia fugax, the pathophysiology of these syndromes and the treatments that can be proposed. MATERIAL AND METHODS: Review of articles published on the theme based on a Medline (PubMed) search and consensus conferences selected according to their scientific relevance. RESULTS: IBS is very common. Patients report abdominal pain and/or discomfort, bloating, and abnormal bowel habit (diarrhoea, constipation or both), in the absence of any structural or biochemical abnormalities. IBS has a complex, multifactorial pathophysiology, involving biological and psychosocial interactions resulting in dysregulation of the brain-gut axis associated with disorders of intestinal motility, hyperalgesia, immune disorders and disorders of the intestinal bacterial microflora and autonomic and hormonal dysfunction. Many treatments have been proposed, ranging from diet to pharmacology and psychotherapy. DISCUSSION: Patients with various types of chronic pelvic and perineal pain, especially those seen in urology departments, very often report associated IBS. This syndrome is also part of a global and integrated concept of pelviperineal dysfunction, avoiding a rigorous distinction between the posterior segment and the midline and anterior segments of the perineum.

The doctor-patient relationship in chronic pelvic and perineal pain.
[Article in French]
Labat JJ, Bensignor M, Boutet M, Delavierre D, Sibert L, Rigaud J
Prog Urol. 2010 Nov;20(12):911-6

OBJECTIVE: To analyse the doctor-patient relationship from the patient's point of view and from the doctor's point of view. MATERIAL AND METHODS: Experience of a chairman of a chronic pelvic and perineal pain patient association (AFAP-NP) and experience of doctors specialized in chronic pelvic and perineal pain. RESULTS: Management of a patient with chronic pelvic and perineal pain requires knowledge and understanding of the patient's trajectory disease, the history of the disease and the patient's hopes and disappointments, and evaluation of the patient's personality and family, social and work environment. CONCLUSION: As pain is an emotional experience, the type of doctor-patient relationship determines the quality of

subsequent management. A number of basic principles should be applied: believe the patient, avoid making the patient feel responsible for failure, avoid overestimating the secondary benefits, avoid making the patient passive and dependent, learn to reinterpret the patient's symptoms, ask "how" does the pain persist rather than "why", clearly define the patient's demand and adapt management to realistic and accessible objectives.

Early dyspareunia experience in young women: confusion, consequences, and help-seeking barriers.
Donaldson RL, Meana M
J Sex Med. 2010 Dec 8. [Epub ahead of print]

Introduction. Recurrent painful intercourse or dyspareunia is a highly prevalent health problem associated with impairments in sexual function and psychosocial well-being. Despite its particularly high prevalence in young women, little is known about how young women experience the onset of dyspareunia and how they attempt to manage or address the problem. Aims. To explore the subjective experience of early dyspareunia symptoms in young women so as to model its cognitive, emotional, behavioral, and help-seeking trajectory. Methods. Using a qualitative methodology broadly based on grounded theory, 14 young women reporting recurrent entry and/or deep pain with intercourse underwent in-depth semistructured interviews asking them to describe their personal experience with dyspareunia symptoms. Main Outcome Measures. The Female Sexual Function Index was used to screen women with symptoms of dyspareunia. The main outcome measure was a semistructured interview inquiring about the cognitions and emotions associated with the experience of pain with intercourse, causal attributions for the pain, interference with personal, relational, and sexual well-being, and help-seeking decisions. Results. The model/theory that emerged suggested a sequence of experiences that began with confusion about the onset of pain and a relatively fruitless search for causal attributions. Attempts to self-manage the pain via a number of cognitive and behavioral strategies provided little relief. Deleterious consequences on sexual function, well-being, and relationships ensued, and women reported a number of barriers to help-seeking. Conclusion. The findings from this study suggest that a lack of public health information about dyspareunia and the reluctance of health care providers to inquire about sexual problems may contribute to many young women delaying treatment for a serious sexual health problem with potentially negative biopsychosocial outcomes.

Female sexual pain disorders and cognitive behavioral therapy.
Lofrisco BM
J Sex Res. 2010 Dec 22:1-7 [Epub ahead of print]

Female sexual pain disorders are prevalent and have a deleterious effect on women's well-being. Because there are psychological elements to this pain, cognitive-behavioral therapy (CBT) may be a viable treatment alternative, particularly when compared to more physically invasive treatments such as surgery or medication. This article provides a critical analysis of

research studies in this area by evaluating each study in detail, identifying gaps in the research base, and providing directions for future study. For the most part, all of the studies reviewed in this article found CBT to be effective. However, CBT modalities with minimal therapist direction or interaction were found to be problematic. In addition, there may be other noninvasive treatment types that are equally or more effective, such as biofeedback or supportive psychotherapy.

Pain

Central sensitization: Implications for the diagnosis and treatment of pain.
Woolf CJ
Pain. 2010 Oct 18 [Epub ahead of print]

Nociceptor inputs can trigger a prolonged but reversible increase in the excitability and synaptic efficacy of neurons in central nociceptive pathways, the phenomenon of central sensitization. Central sensitization manifests as pain hypersensitivity, particularly dynamic tactile allodynia, secondary punctate or pressure hyperalgesia, aftersensations, and enhanced temporal summation. It can be readily and rapidly elicited in human volunteers by diverse experimental noxious conditioning stimuli to skin, muscles or viscera, and in addition to producing pain hypersensitivity, results in secondary changes in brain activity that can be detected by electrophysiological or imaging techniques. Studies in clinical cohorts reveal changes in pain sensitivity that have been interpreted as revealing an important contribution of central sensitization to the pain phenotype in patients with fibromyalgia, osteoarthritis, musculoskeletal disorders with generalized pain hypersensitivity, headache, temporomandibular joint disorders, dental pain, neuropathic pain, visceral pain hypersensitivity disorders and post-surgical pain. The comorbidity of those pain hypersensitivity syndromes that present in the absence of inflammation or a neural lesion, their similar pattern of clinical presentation and response to centrally acting analgesics, may reflect a commonality of central sensitization to their pathophysiology. An important question that still needs to be determined is whether there are individuals with a higher inherited propensity for developing central sensitization than others, and if so, whether this conveys an increased risk in both developing conditions with pain hypersensitivity, and their chronification. Diagnostic criteria to establish the presence of central sensitization in patients will greatly assist the phenotyping of patients for choosing treatments that produce analgesia by normalizing hyperexcitable central neural activity. We have certainly come a long way since the first discovery of activity-dependent synaptic plasticity in the spinal cord and the revelation that it occurs and produces pain hypersensitivity in patients. Nevertheless, discovering the genetic and environmental contributors to and objective biomarkers of central sensitization will be highly beneficial, as will additional treatment options to prevent or reduce this prevalent and promiscuous form of pain plasticity.

Pain: sex differences and implications for treatment.
Manson JE
Metabolism. 2010 Oct;59 Suppl 1:S16-20

Women have a higher prevalence than men of several clinical pain conditions and of inflammation-mediated disorders. There is also increasing evidence for sex differences in sensitivity to experimental pain and in the response to analgesics. Estrogen, progesterone, and other gonadal hormones have a complex role in inflammatory processes and the pain response. Microglia cells in the central nervous system, which have sex hormone receptors, become activated in response to inflammatory stimuli, releasing cytokines and other mediators that are pronociceptive and can amplify the pain response. Although the mechanisms underlying sex differences in pain and analgesia have not been fully elucidated, both peripheral and central nervous systems pathways may be involved. Sex differences in the opioid, dopaminergic, serotoninergic, and other pain-related systems have been documented; and some evidence suggests that differences are most pronounced during the peak reproductive years. Psychosocial factors also play an important role. Given the important role of inflammation in mediating pain, nutritional factors that modulate the inflammatory response offer a promising and exciting new avenue for the prevention and treatment of chronic pain disorders. Of particular interest is the potential role of moderate- to high-dose vitamin D and omega-3 fatty acid supplements, both of which have powerful anti-inflammatory effects. These nutritional interventions, which influence cytokine, leukotriene, and prostaglandin pathways, may be of particular benefit to women due to their higher prevalence of inflammatory chronic pain disorders. The recent launch of a new large-scale randomized trial of these nutritional supplements provides an opportunity to assess their potential antinociceptive role. Additional research is needed to clarify the mechanisms for sex differences in pain and to develop new treatment modalities that improve pain management for both men and women.

NMDA receptor antagonists for the treatment of neuropathic pain.
Collins S, Sigtermans MJ, Dahan A, Zuurmond WW, Perez RS
Pain Med. 2010 Nov;11(11):1726-42

OBJECTIVE: The N-methyl-D-Aspartate (NMDA) receptor has been proposed as a primary target for the treatment of neuropathic pain. The aim of the present study was to perform a meta-analysis evaluating the effects of (individual) NMDA receptor antagonists on neuropathic pain, and the response (sensitivity) of individual neuropathic pain disorders to NMDA receptor antagonist therapy. DESIGN: PubMed (including MEDLINE), EMBASE and CENTRAL were searched up to October 26, 2009 for randomized placebo controlled trials (RCTs) on neuropathic pain. The methodological quality of the included trials was independently assessed by two authors using the Delphi list. Fixed or random effects model were used to calculate the summary effect size using Hedges' g. SETTING: NA. PATIENTS: The patients used for the study were neuropathic pain patients. INTERVENTIONS: The interventions used were NMDA receptor antagonists. OUTCOME MEASUREMENTS: The outcome of measurements was the reduction of

spontaneous pain. RESULTS: Twenty-eight studies were included, meeting the inclusion criteria. Summary effect sizes were calculated for subgroups of studies evaluating ketamine IV in complex regional pain syndrome (CRPS), oral memantine in postherptic neuralgia and, respectively, ketamine IV, and oral memantine in postamputation pain. Treatment with ketamine significantly reduced pain in postamputation pain (pooled summary effect size: -1.18 [confidence interval (CI) 95% -1.98, -0.37], P = 0.004). No significant effect on pain reduction could be established for ketamine IV in CRPS (-0.65 [CI 95% -1.47, 0.16], P = 0.11) oral memantine in postherptic neuralgia (0.03 [CI 95% -0.51, 0.56], P = 0.92) and for oral memantine in postamputation pain (0.38 [CI 95% -0.21, 0.98], P = 0.21). CONCLUSIONS: Based on this systematic review, no conclusions can yet be made about the efficacy of NMDA receptor antagonists on neuropathic pain. Additional RCTs in homogenous groups of pain patients are needed to explore the therapeutic potential of NMDA receptor antagonists in neuropathic pain.

Other Vulvovaginal Disorders

Vaginal estrogens for the treatment of dyspareunia.
Krychman ML
J Sex Med. 2010 Nov 22. [Epub ahead of print]

Introduction. Vaginal atrophy, which is associated with vaginal itching, burning, dryness, irritation, and pain, is estimated to affect up to 40% of postmenopausal women. Estrogens play a key role in maintaining vaginal health; women with low serum estradiol are more likely to experience vaginal dryness, dyspareunia, and reduced sexual activity compared with women who have higher estradiol levels. Aims. The purpose of this review is to assess the prevalence and impact of dyspareunia, a symptom of vaginal atrophy, on the health of postmenopausal women and to evaluate treatment options using vaginal estrogens (U.S. Food and Drug Administration [FDA] approved). Methods. Relevant published literature was identified by searching Index Medicus using the PubMed online database. The search terms dyspareunia, vaginal estrogen, vaginal hormone therapy, vaginal atrophy, and atrophic vaginitis were the focus of the literature review. Results. Current treatment guidelines for vaginal atrophy recommend the use of minimally absorbed local vaginal estrogens, along with non-hormonal lubricants or moisturizers, coupled with maintenance of sexual activity. Vaginal estrogen therapy has been shown to provide improvement in the signs and symptoms of vaginal or vulvar atrophy. Vaginal tablets, rings, and creams are indicated for the treatment of vaginal atrophy, and the FDA has recently approved a low-dose regimen of conjugated estrogens cream to treat moderate-to-severe postmenopausal dyspareunia. The use of low-dose vaginal estrogens has been shown to be effective in treating symptoms of vaginal atrophy without causing significant proliferation of the endometrial lining, and no significant differences have been seen among vaginal preparations in terms of endometrial safety. Conclusion. Women should be informed of the potential benefits and risks of the treatment options available, and

with the help of their healthcare provider, choose an intervention that is most suitable to their individual needs and circumstances.

Attitudes and experience of women to common vaginal infections.
Johnson SR, Griffiths H, Humberstone FJ
J Low Genit Tract Dis. 2010 Oct;14(4):287-94

OBJECTIVE: To determine women's experience and knowledge of the 2 most common non-sexually transmitted vaginal infections, vulvovaginal candidiasis (VVC) and bacterial vaginosis (BV). MATERIALS AND METHODS: An online omnibus was conducted on 6,010 women aged 16 to 55 years to determine the incidence and awareness of VVC and BV in Europe (France, Germany, the Netherlands, Sweden, and the United Kingdom) and the United States, followed by an in-depth questionnaire on 1,945 women about experience and attitudes to VVC and BV. RESULTS: Almost all (97%) of the women who took part stated that they were aware of VVC and 44% reported having had VVC, whereas only 30% of women had heard of BV and only 9% thought they had experienced it. There was confusion between symptoms specifically related to each condition, and women thought they were caused by poor hygiene, ill health, or a sexually transmitted infection, with antibiotic use cited as a cause for VVC only. Diagnosis was generally by a health care professional, but there was also considerable self-diagnosis in countries where an over-the-counter treatment was available for VVC. Rates of reported examination and testing by the health care provider varied by country, with high rates in Germany and low rates in the United Kingdom. CONCLUSIONS: Women seem very aware and knowledgeable about VVC, but awareness of BV is low with self-reported incidence considerably less than prevalence rates, suggesting misdiagnosis. Increased education and better diagnosis of these 2 conditions is needed to remove the stigma and taboo, especially for BV, and to ensure correct diagnosis with appropriate treatment.

Risk factors for recurrent vulvovaginal candidiasis.
Janković S, Bojović D, Vukadinović D, Daglar E, Janković M, Laudanović D, Lukić V, Misković V, Potpara Z, Projović I, Cokanović V, Petrović N, Folić M, Savić V
Vojnosanit Pregl. 2010 Oct;67(10):819-24

BACKGROUND/AIM: Recurrent vulvovaginal candidiasis is relatively frequent condition, and may have serious health consequences, like chronic vulvovaginal pain syndrome. The aim of our study was to determine possible risk factors for recurrent vulvovaginal candidiasis in non-pregnant females within the reproductive age. METHODS: The design of our study was of a case-control type. Case and control patients were selected from the gynecological patients at six primary care facilities in Serbia and in Montenegro. The data on the patients' health condition, concomitant therapy and diseases were taken from their records, and the data on habits were obtained by unstructured interview. For potential risk factors crude odds ratios were calculated, and then adjusted by logistic regression. RESULTS: A total of fifty-one patients had four or more episodes of vulvovaginal candidiasis during the last year (cases), and 132

patients with one to three episodes of vulvovaginal candidiasis were sampled as controls, matched by age. The only two significant associations were found between recurrent vulvovaginal candidiasis and continual wearing of panty liners during the last year (Odds ratio - OR adjusted: 3.97; confidence interval--CI: 1.57-10.02;p = 0.004), and between recurrent vulvovaginal candidiasis and predominant use of vaginal tampons during menstruation in the last year (OR adjusted: 4.25; CI: 1.11-16.27;p = 0.035). The synergistic effect was observed for the concurrent continual wearing of panty liners during the last year and self-medication with antimycotics. CONCLUSIONS: Local factors, like wearing of panty liners or use of tampons during menstruation, may promote recurrence of vulvovaginal candidiasis, especially in patients who practice self-medication with antimycotics.

Epithelial cell-derived S100 calcium-binding proteins as key mediators in the hallmark acute neutrophil response during Candida vaginitis.
Yano J, Lilly E, Barousse M, Fidel PL Jr
Infect Immun. 2010 Dec;78(12):5126-37

Vulvovaginal candidiasis (VVC), caused by Candida species, is a significant problem in women of childbearing age. Similar to clinical observations, a robust vaginal polymorphonuclear neutrophil (PMN) migration occurs in a subset of mice without affecting vaginal fungal burden. We hypothesize that the vaginal PMN infiltrate and accompanying inflammation are not protective but instead are responsible for the symptoms of infection. The purpose of this study was to identify the signal(s) associated with the PMN response in the established mouse model. Vaginal lavage fluid from inoculated mice were categorized base on PMN counts, evaluated for PMN chemotactic activity and analyzed by SDS-PAGE and mass spectrometry (MS) for unique protein identification. The lavage fluid from inoculated mice with high, but not low, PMN levels showed increased chemotactic activity. Likewise, SDS-PAGE of lavage fluid with high PMN levels showed distinct protein patterns. MS revealed that bands at 6 and 14 kDa matched the PMN chemotactic calcium-binding proteins (CBPs), S100A8 and S100A9, respectively. The presence of the CBPs in lavage fluid was confirmed by Western blots and enzyme-linked immunosorbent assay. Vaginal tissues and epithelial cells from inoculated mice with high PMN levels stained more intensely and exhibited increased mRNA transcripts for both proteins compared to those in mice with low PMN levels. Subsequent antibody neutralization showed significant abrogation of the chemotactic activity when the lavage fluid was treated with anti-S100A8, but not anti-S100A9, antibodies. These results reveal that the PMN chemotactic CBP S100A8 and S100A9 are produced by vaginal epithelial cells following interaction with Candida and that S100A8 is a strong candidate responsible for the robust PMN migration during experimental VVC.

Vulvovaginitis and other common childhood gynaecological conditions.
Garden AS
Arch Dis Child Educ Pract Ed. 2010 Nov 30. [Epub ahead of print]

Paediatric gynaecological problems, especially those involving the vulvar area, are common in childhood. The conditions frequently seen include recurrent bacterial vulvovaginitis, vulvar irritation, labial adhesions and dermatological conditions. The presentation and management of these conditions will be reviewed.

Differentiated vulvar intraepithelial neoplasia is often found in lesions, previously diagnosed as lichen sclerosus, which have progressed to vulvar squamous cell carcinoma.
van de Nieuwenhof HP, Bulten J, Hollema H, Dommerholt RG, Massuger LF, van der Zee AG, de Hullu JA, van Kempen LC
Mod Pathol. 2010 Nov 5. [Epub ahead of print]

Lichen sclerosus is considered to be the precursor lesion of vulvar squamous cell carcinoma, of which only 2-5% progress to squamous cell carcinoma. Differentiated vulvar intraepithelial neoplasia (VIN) has been proposed to be the direct precursor lesion, but this is a recently recognized, and a difficult to diagnose, entity, which may easily be mistaken for a benign dermatosis. The aim of this study was to test the hypothesis that of all lesions that have been diagnosed as lichen sclerosus in the past, a part might currently be diagnosed as differentiated VIN, and to identify histopathological differences between lichen sclerosus lesions with and without progression to vulvar squamous cell carcinoma. All lichen sclerosus slides were revised by two expert gynecopathologists and histopathological characteristics were documented. After revision of lichen sclerosus biopsies without progression (n=61), 58 were reclassified as lichen sclerosus. Revision of lichen sclerosus biopsies with progression yielded concordant diagnoses in 18 of 60 cases (30%). Of 60 lesions, 25 (42%) were reclassified as differentiated VIN. The median time from differentiated VIN to vulvar squamous cell carcinoma was shorter (28 months) than that from lichen sclerosus to vulvar squamous cell carcinoma (84 months) ($P<0.001$). Lichen sclerosus that progressed to squamous cell carcinoma, but did not meet the criteria for differentiated VIN, more often showed parakeratosis ($P=0.004$), dyskeratosis ($P<0.001$), hyperplasia ($P=0.048$) and basal cellular atypia ($P=0.009$) compared with lichen sclerosus without progression. In conclusion, differentiated VIN diagnosis has been frequently missed and is associated with rapid progression to squamous cell carcinoma. Patients with lichen sclerosus with dyskeratosis and parakeratosis, hyperplasia and/or basal cellular atypia should be kept under close surveillance as these lesions also tend to progress to squamous cell carcinoma.

The treatment of vulvar lichen sclerosus and female sexual dysfunction.
Burrows LJ, Creasey A, Goldstein AT
J Sex Med. 2010 Oct 18. [Epub ahead of print]

Introduction. Women with lichen sclerosus (LS) are more likely to have dyspareunia, decreased orgasm, and decreased coital frequency as compared to unaffected women. It is unknown whether standard medical therapy to treat LS results in improved sexual functioning. Aims. To describe sexual function in women with LS and to assess if LS-associated sexual

dysfunction decreases after appropriate medical therapy. Methods. Women enrolled in a double-blind trial 12-week trial comparing clobetasol vs. pimecrolimus for the treatment of LS were administered the Female Sexual Distress Scale (FSDS) upon enrollment and at the end of the trial. The difference in the total score on the FSDS between the two groups before and after treatment was assessed with a paired t-test. Main Outcome Measures. The change in mean FSDS score from baseline to 12 weeks. Results. A total of 31 out of 36 enrolled women had adequate treatment of LS as determined by a dermatopathologist's evaluation of pre and post-treatment biopsy specimens. The mean baseline FSDS score for the clobetasol group was 29 and, post-treatment, it was 15 (P = 0.001). In the pimecrolimus group, the mean baseline FSDS score was 27 and, post-treatment, it was 21 (P = 0.001). Conclusions. Despite adequate treatment, women with LS continue to have significant sexual dysfunction as assessed by the FSDS. Burrows LJ, Creasey A, and Goldstein AT. The treatment of vulvar lichen sclerosus and female sexual dysfunction.

Epstein-Barr virus and human papillomavirus infection in vulvar lichen sclerosus.
Aidé S, Lattario FR, Almeida G, do Val IC, da Costa Carvalho M
J Low Genit Tract Dis. 2010 Oct;14(4):319-22

OBJECTIVE: We investigated the presence of the Epstein-Barr virus (EBV) and human papillomavirus (HPV) in patients with vulvar lichen sclerosus (LS). MATERIALS AND METHODS: We investigated the presence of HPV and EBV from 34 vulvar biopsies of patients with LS who had had no previous treatment and from 17 normal vulvar brushings used as controls. We used polymerase chain reaction to amplify DNA sequences of these viruses. Human papillomavirus and EBV DNA detection was carried out using MY09/MY11 and TC67/TC69 consensus primers, respectively. The amplified polymerase chain reaction products were analyzed by 10% polyacrylamide gel. RESULTS: The mean age of the patients was 57 years old, with the majority postmenopausal. Human papillomavirus DNA was not found in the LS samples studied, but it was found in 23.2% (4/17) of the controls. However, EBV DNA was found in 26.5% (9/34) of the LS samples analyzed, and it was not found in the controls. CONCLUSIONS: Our results showed no relationship between HPV and LS. This result is in accordance with the literature. We have found 26.5% of EBV in our samples. This is a preliminary study, and the follow-up of these patients will elucidate whether EBV could play a role in cases of LS.

Promoter hypermethylation patterns of death-associated protein kinase and p16 genes in vulvar lichen sclerosus.
Aidé S, Lattario FR, Almeida G, do Val IC, Carvalho Mda G
J Low Genit Tract Dis. 2010 Oct;14(4):282-6

OBJECTIVE: This article aimed to investigate the hypermethylation of promoter regions of tumor suppressor genes, such as death-associated protein kinase (DAPK) and p16, in vulvar lichen sclerosus (LS). MATERIALS AND METHODS: The promoter hypermethylation of DAPK and

p16 was investigated from 15 vulvar biopsies of patients with LS who had had no previous treatment. DNA was treated with sodium bisulfate and underwent methylation-specific polymerase chain reaction of these genes. The amplified polymerase chain reaction products were analyzed by 10% polyacrylamide gel. RESULTS: The mean age of the patients was 57 years (most were postmenopausal). Methylation of the promoter region of DAPK was found in 2 (13%) of 15 patients analyzed, and p16 promoter region methylation was found in 7 patients (47%). The samples that showed DAPK methylation also showed p16 methylation. CONCLUSIONS: Methylation of DAPK and p16 represent alterations that might occur in cell cycle control in LS. The hypothesis is that patients who had methylated genes in this study, mainly the 2 cases in which there has been methylation in both studied genes, may be more susceptible to the development of differentiated vulvar intraepithelial neoplasia or vulvar cancer. Methylation may play a role in progress of vulvar carcinogenesis.

Lichen sclerosus.
Murphy R
Dermatol Clin. 2010 Oct;28(4):707-15

Lichen sclerosus (LS) is an inflammatory skin disease predominantly affecting the anogenital region. If untreated, progressive sclerosis results in scarring with distortion of the normal architecture. LS occurs more commonly in women than men but may occur in all age groups, including adolescents and prepubertal children. Its exact prevalence is unknown, but estimates range from 1:60 to 1:1000. In this article, LS is discussed in detail with respect to disease management in adults and children, risk of malignancy, and association with other diseases.

British Association of Dermatologists' guidelines for the management of lichen sclerosus 2010.
Neill SM, Lewis FM, Tatnall FM, Cox NH; British Association of Dermatologists
Br J Dermatol. 2010 Oct;163(4):672-82

No abstract available.

Contact dermatitis of the vulva.
Schlosser BJ
Dermatol Clin. 2010 Oct;28(4):697-706

Contact dermatitis of the vulva is common, with irritant contact dermatitis occurring more frequently than allergic contact dermatitis. Patients with chronic vulvar dermatoses are at greater risk and should continually be reassessed for possible contact dermatitis. Comprehensive and specific questioning about hygiene practices and product use is necessary to elicit a history of contactant use. Patch testing is required to identify relevant contact allergens, the most common of which include medicaments, preservatives, and fragrances.

Patient education and follow-up are essential in optimizing treatment and preventing recurrence of vulvar contact dermatitis.

Desquamative inflammatory vaginitis: differential diagnosis and alternate diagnostic criteria.
Bradford J, Fischer G
J Low Genit Tract Dis. 2010 Oct;14(4):306-10

OBJECTIVE: To describe alternate diagnostic protocols and describe the differential diagnosis for desquamative inflammatory vaginitis (DIV). MATERIALS AND METHODS: One hundred one cases of DIV were audited retrospectively. All patients were seen exclusively by the authors in their private practices using diagnostic criteria applicable to local practice limitations. Other potential etiologies (infection, contact irritant vaginitis, fixed drug eruptions, immunobullous diseases, estrogen hypersensitivity vulvovaginitis, and graft-vs-host disease) were excluded by history, examination, and focused trials of treatment. Historical triggers in the study cohort and a control group of 75 women with lichen planus also drawn from the authors' private practice were compared. Patients were treated with 4 to 6 weeks of topical vaginal antibiotics, 94% with clindamycin, and response to treatment was recorded at subsequent follow-up. RESULTS: All patients were white. Of 101 patients, 57 (56%) had historical triggers, most frequently diarrhea or antibiotic treatment. Of the 75 women in the control group with vaginal lichen planus, 11 had historical triggers (15%, p <.0001). Of 101 patients, examination revealed classic ecchymotic findings in 55 (54%), confluent erythema in 36 (36%), involvement of the upper vagina in 8 (8%), and heavy discharge in only 2 (2%). Of 101 patients, 54 (54%) had no significant abnormality on laboratory microbiological testing. Moreover, 20 (20%) had a pure growth of a commensal organism on culture, of which 13 were group B streptococci. Of 101 patients, 96 (95%) were symptomatically and objectively improved at initial review. On the other hand, 45 (45%) required maintenance treatment. Of this group, 10 patients who had triggers for their vaginitis, which were ongoing, were cured when their triggers were finally controlled or cured, leaving 35 patients who required long-term maintenance therapy. CONCLUSIONS: Desquamative inflammatory vaginitis seems to be a distinct entity of vaginitis that, in an office setting, can be distinguished from other diagnostic possibilities by careful clinical evaluation and focused trials of treatment. The majority of women responded promptly to intravaginal antibiotics, with approximately 35% of cases requiring maintenance therapy. More than half the cases have an historical trigger. We postulate that DIV occurs when a trigger causes shifts in vaginal homeostasis, resulting in an inflammatory response associated with increased epithelial cell turnover.

Anatomy / Basic Science

A unique variation of the pudendal nerve.
Yi SQ, Itoh M

Clin Anat. 2010 Nov;23(8):907-8

No abstract available.

Anatomy and physiology of chronic pelvic and perineal pain.

[Article in French]

Labat JJ, Robert R, Delavierre D, Sibert L, Rigaud J

Prog Urol. 2010 Nov;20(12):843-52

OBJECTIVE: To determine the mechanisms involved in the regulation of pelvic and perineal pain. MATERIAL AND METHODS: Description of the anatomical pathways mediating nociceptive transmission and the physiological mechanisms of pain control. RESULTS: The pelvis and perineum do not have the same innervation. The pelvis is innervated by the sympathetic nervous system, while the perineum is innervated by the somatic nervous system via sacral nerve roots (and the pudendal nerve) and the thoracolumbar sympathetic nervous system. Systems of regulation of nociceptive messages are present at all levels of the nervous system. Two of these systems are essential: one situated in the dorsal horns of the spinal cord (gate control) and another supraspinal system (descending inhibitory system). Via a series of filters and amplifiers, the nociceptive message is integrated and analysed in the cerebral cortex, with interconnections with various areas, especially involving memory and emotion. CONCLUSION: Excessive nociceptive stimulation must be clearly distinguished from dysfunction of pain control systems (for example neuropathic pain). The definition of pain: "unpleasant sensory and emotional experience related to a real or potential tissue lesion or described in terms of such a lesion" clearly indicates that not all pain is inevitably related to a persistent and visible cause. Convergence phenomena identified between nerve pathways of the various systems and pelvic organs account for the possible diffusion of visceral nociceptive messages and interactions between organs. A good knowledge of anatomy is essential to understand the patient's description of the pain, and a good knowledge of the modalities of pain control is essential to correctly adapt treatment strategies (drugs, neurostimulation, psycho-behavioural therapy, etc.).