

Methods: From 1988 to 1991 we treated 57 patients (pts) (mean age 71.7 ± 11): 43 men and 14 women, of which 21 were diabetics. these pts had either already undergone surgical treatment or were considered as not liable to be affected by surgical treatment. All pts had undergone Doppler ultrasound recordings and arteriography of the lower limbs. Thirty-one had undergone a sympathectomy. A percutaneous implant technique was used with a stimulation level from D9-D11. We used 4 Medtronic™ different system: external RF system with monopolar lead (14 pts), external RF with quadripolar lead (XTREL™) (13 pts), PM Irel I™ (21 pts), PM Irel II™ (9 pts); all systems with the following parameters: Amplitude 1-4 V, Frequency 85 Hz, Pulse Width (PW) 330 µsec, continuous mode until healing and after cyclic 1 min ON and 2 min OFF.

Results: We had a good result with only 5 amputation immediately (11%) and 7 after two years. Patients like the RF system best and these systems also gave better results though not statistically significant. Mortality was 48% with average 49 months in the follow-up between 4-7 years. Average cost per year of survival: for monopolar RF system \$ 1,000 a year, for PM Irel II™ and RF XTREL™ \$ 2,000 and for Irel I™ \$ 3,000.

Conclusions: SCS is undoubtedly a useful therapy in treating Critical Limb Ischemia (CLI), sufficiently cheap with external RF system.

106 PERINEAL PAIN SECONDARY TO ANAL SURGERY AND SPINAL CORD STIMULATION. Ph. Randour+, V. Delire+, M.A. Nisolle+*, Cl. Gillard*§, S. Broka*, E. Collard*, A. Ducart*, A. Mayne*, K. Joucken.*, + Pain Clinic Unit, § Neurosurgery Unit, Catholic Univ of Louvain, Anesthesiology Dept, Mont-Godinne Unit, 5530 Yvoir, Belgium.

Aim of Investigation: Perineal, genital and anal pains that occur after surgery for trite anal procedure are a regular reason of «pain clinic» advice. When direct surgical or proctological causes of pain have been excluded, we are in face of a patient with «intractable pain». The origin of these pains is fairly often difficult to determine.

Report of case: A 49 old years patient has had in 1987 haemorrhoidectomy surgical procedure. Since this time, he complains pain in anal, perineal and scrotal areas and also regular anal bleeding. Multiple surgical procedures were realized to resolve these bleeding problems with unconvincing results. All others complementary exams were normal. When we saw this patient for the first time in our pain clinic unit, in February 1995, he described his pain as unendurable, continuous (V.A.S 7/10) with acute crisis (V.A.S. 10/10) that responded only to strong I.M. opioid drugs. His basic treatment at this time was oral pentazocium, prozac and carbamazepium. During acute crisis piritramide (a mu opioid agonist) was injected I.M. with good but transient results. Particularly dynamic before his first anal surgery, after 8 years of suffering without probant results, our psychoallogologist described the patient as depressed with the possibility of autolysis. Anal exam wasn't contributive, electromyography confirmed a bilateral non evolutive neurogenic peripheral lesion in anal muscles.

Results: In face of the good response of pain to I.M. opioids injection, M.S.Contin was prescribed to the patient, as basic treatment, with the possibility to use syrup of morphine in case of acute crisis. But rapidly he developed classical morphine secondary effects and the results on his pain were disappointing. (V.A.S. from 3 to 10) with a mean consumption of 120 mgr. of morphine. Spinal cord stimulation (S.C.S.) with a Resume II lead (Medtronic inc.) was attempted. The lead was placed middle at T11 and T12 level. We stimulated T12 level and paresthesia was resented in all painful area. One month test period was realized with a progressive decrease of morphine consumption. At the end of the test period, the consumption of morphine was reduced by 80% and V.A.S. was went up 0/10 to 3/10. Definitive implantation was decided.

Conclusions: In front of benign intractable anal pain S.C.S. must be an arm in our therapeutic arsenal. Unfortunately we didn't found literature

devoted to this precise subject. Our questions on the Internet and MSN medical BBS were left without satisfactory response.

107 PROSPECTIVE SPINAL CORD STIMULATION TREATMENT OUTCOME STUDY. J. Diede, G. Racz, P. Randolph*, D. Fletcher* and J.E. Heavner, Dept of Anesthesiology, Texas Tech Univ Health Sciences Ctr, Lubbock TX 79430, USA

Aim of Investigation: This prospective study was designed to investigate the response of patients to spinal cord stimulation (SCS) in the management of their chronic pain.

Methods: Following spinal cord stimulation implant, patients were asked to rate their pain relief as none, minimal, good or excellent at 2 months, 6 months, and 1 year. Limited follow-up data are available at 1 year so 6 month results are reported.

Results: 15 males and 30 females are enrolled in the study. All had pain relief during a trial stimulation period before receiving the permanent implant. At 6 month follow-up of 19 patients, 95% reported some pain relief (1 none, 7 minimal, 10 good, 1 excellent). The stimulator was turned off or removed from 7 patients because of infection, pregnancy, inadequate coverage of the painful area, or the patient developed cancer.

Conclusions: With appropriate patient selection, a high percentage of patients benefit from spinal cord stimulation as part of their pain management.

108 SPINAL CORD STIMULATION AN AUDIT OF EFFICACY AND PATIENT SATISFACTION. J.N. Hodkinson, Pain Management Clinic, Furness General Hosp, Barrow in Furness, Cumbria UK.

Aims of Investigation : This five year, retrospective study of 22 patients assesses the efficacy of spinal cord stimulation (S.C.S.) patient acceptance and satisfaction with the technique.

Method: The study comprises of two postal questionnaires to the recipients of percutaneous epidural S.C.S. devices to determine (1) with relation to diagnostic category and equipment details, efficacy in pain relief, functional activity, circulation, neurological symptoms, sleep (by visual analogue percentage score), medication and usage. An audit of complications was prepared. (2) Patient satisfaction questionnaire was anonymous and returned separately to allow candid assessment and freedom of comment.

Results: There was general improvement in all the efficacy criteria 41 to 55%, A reduction in medication usage. The common complications were electrode migration and pain over insertion sites. Some difference in complications is apparent between the two electrode groups. Patient survey revealed high levels of satisfaction meeting expectations. There was 22% reporting of undue pain, discomfort, anxiety and inconvenience?. Study groups were further separated according to diagnosis and will be subject to analysis.

Conclusion: An implanted S.C.S. is an effective method of pain and symptom control. The procedure and equipment are well tolerated and produce few side effects and do not reduce overall patient satisfaction and expectation.

109 COMPLICATIONS OF SPINAL CORD STIMULATION. J.A. De Vera and J.L. Rodriguez, Pain Unit, Santa Cruz de Tenerife, Canary Islands, Spain

Aim Of Investigation. Complications resulting of the use of SCS result from the operative procedure or from later changes in the delivery of the stimulus.

Methods. 100 cases were implanted in our Hospital over a period of 10 years. The criteria for selection include examination, pain characteristics, MMPI test evaluation and some cases trail of TENS. 30 patients were implanted for PVD., 12 for RSD, 40 for failed back surgery, 10 for motor disorders and 9 for different pathology.