Conclusions: The technique seems to give good visceral pain reduction and the complications described in the posterior techniques do not occur.

4 COMBINED LUMBAR RFTC SYMPATHOLYSIS AND SOMATIC NERVE BLOCK: A NEW TECHNIQUE FOR TREATING SMP+SIP. G. Racz, J. Diede* and J.E. Heavner. Anesthesiology, TTUHSC, Lubbock, TX 79430, USA

Aim of Investigation: The aim of the present study was to assess outcomes of combined radiofrequency thermal coagulation (RFTC) lumbar sympatholysis with emphasis on lysing L5, and somatic nerve block to treat patients with sympathetically maintained pain (SMP) plus sympathetically independent pain (SIP) involving the lower extremity.

Methods: 17 males and 26 females were involved in the study. SIP was addressed using a combination of three-in-one block and epidural infusion of local anesthetic and opioid targeted to the L-5, S-1 nerve roots on the affected side. RFTC sympatholysis was done using a new 10 cm active tip, blunt needle developed by Radionics. Our approach was to do a single lesion at the level of L-2,3 and 4, and in the event of involvement of the foot, at L-5 as well.

Results: All patients experienced a reduction in pain intensity following treatment that lasted from less than 1 month to over 6 months. Nine patients were lost to follow-up so duration of pain relief in these patients is not known. No complications associated with treatment occurred.

Conclusion: The newly designed RFTC needle and technique provide access to L-5 sympathetic ganglia which until now have been difficult to approach surgically or percutaneously. Incidence of complications in this limited study was zero and success rate in terms of pain relief was high. Further evaluation of this approach is warranted.

5 SUPERIOR HYPOGASTRIC BLOCK CAN RELIEF PURE URINARY BLADDER PAIN DUE TO BLADDER CANCER. M.Omar Tawfik MD, and Ahmed Helmy Abouel Soud MD. Dept of Anesthesiology, Algology, and I.C.U.,National Cancer Inst, Cairo Univ, Cairo, Egypt..

Aim of the Study:The most common and the most annoying pain symptom due to inoperable bladder cancer is the painful Urgency (frequent micturation). However, analysis presenting symptom due to inoperable bladder cancer could define four common sites, mainly: Painful micturation or dysurea, deep pelvic pain, perineal, and penile (vaginal) pain, as isolated or combined sites. This study was carried out to define the ability of permanent superior hypogastric block and/or Saddle phenol block to relief pain due to inoperable bladder cancer, and to compare between 6% aqueous phenol and 50% alcohol as the neurolytic used.

Patients and Methods: Forty patients were randomly managed using superior hypogastric block by a double blind neurolytic administration either in the form of aqueous phenol 6% ,or 50% alcohol,from which 8 ml were injected in either side. If any residual pain persisted , a subarachnoid 0.5 - 0.75 ml of 5% phenol in glycerin was used for saddle block. Verbal rating was used to analysis pain intensity score P.I.S. for each site separately. Pain relief index P.R.I.was used to evaluate pain relief verbally and to relate it to the original pain score. End tidal carbon dioxide ETCO2 was used as an index for the ventilatory response to pain and its relief.

Results: The most common and universally present symptom was the annoying frequent dysurea (100%), followed by deep pelvic pain (90%), Perineal Pain (50%), and penile / vaginal pain (15%). Superior hypogastric block could efficiently relieve pain of bladder origin i.e. the dysurea and deep pelvic pain, without affecting bladder functions. Subarachnoid saddle block was needed to relief pain due to extra-bladder extension in the form of perineal and penile/vaginal pain. There was no statistically significant difference between results obtained after the use of 6% aqueous phenol or 50% alcohol

Conclusion: Our data suggests that urgency and dysurea, as well as deep pelvic pain can be effectively controlled by neurolytic superior hypogastric block, while the sacral complex due to somatic pelvic invasion will need $S_{3,4,5}$ subarachnoid neurolysis. Although there was no statistically significant difference between results obtained from phenol and alcohol blocks, the use of phenol was preferred for being less painful.

6 NEUROLYTIC BLOCK OF THE PECTORAL NERVES LOOP FOR PAINFUL SPASTICITY OF THE PECTORALIS MAJOR MUSCLE. E.J. Viel*, B. Denat*, D. Perenou*, J. Pelissier', J.J. Eledjam* (SPON: A. Langlade), Depts of Anesthesiology, Pain Clinic and Rehabilitation Medicine, Univ Hosp, 30029 Nimes, France

Aim of Investigation: Shoulder pain is common in the hemiplegic patient and contributes to increase disability by hampering voluntary movement recovery and making daily activities painful. Shoulder pain results from several factors gleno-humeral subluxation, capsular and tendon lesions and pectoralis major muscle (PMM) spasticity. The present study was designed to evaluate the effect of early neurolysis of pectoral nerves loop (PNL) in hemiplegic patients.

Methods: 17 females and 20 males hemiplegic patients entered the study. Time from stroke (24 ischaemia, 13 haemorrhage) varied from 41 days to 1 year. inclusion criteria were: shoulder pain, limited arm abduction, PMM spasticity in response to passive arm abduction. Results were evaluated using 5 criteria: shoulder pain (VAS) ; PMM spasticity (Ashworth scale) ; range of shoulder abduction ((RSA) ; FWI (Functionnal Independence Score / daily activities) and occurrence of Reflex Sympathetic Dystrophy (RSD). Neurolysis was performed using 3 to 4 ml of 63° ethanol. Percutaneous approach of the PNL was performed according to cutaneous landmarks previously defined in a cadaveric dissections study. A 2.5 cm insulated needle, connected to a nerve stimulator, was inserted into the PMM al a 1.5 to 2 cm depth. Accurate location was defined by eliciting PMM contraction in response to nerve stimulation. Evaluation was done before (DO^-) and immediately after (DO^-) the block and then at 20, 60 and 120 days (D). Comparison of values to control values were done using analysis of variance and Student's t test. Spearman's Rank Difference Correlation Test was used to compare values two to two. Significance level was set al $p<0.05$.

Results. Shoulder pain decreased from injection time to D60 ($p<0.001$) and then remained stable. Highly significant ($p<0.0001$) difference between DO^- and DO^+ showed the early efficiency on pain as well as on PMM spasticity ($p<0.0001$ between DO^- and DO^+ ;$p<0.0001$ between DO^+ and D120). RSA increased dramatically between DO^- and DO^+ ($p<0.0001$) and then remained stable. FIM score increased significantly from DO^- to D120. RSD symptoms improved regularly in patients with RSD al the time of neurolysis. RSD did not appear in other patients.

Conclusions : Neurolytic blocks are proposed since a long time with conflicting results. Pharmacological therapy (dantrolene, baclofen...) may produce side effects and is frequently partially efficient. This study showed that alcohol neurolysis of the PNL reduced significantly PMM spasticity, relieved shoulder pain and increased the range of abduction and external roation of the arm. These factors dramatically facilitated rehabilitation program and were associated with an improvement of daily activities. The high success rate we obtained could be attributed at least in part to the technique of location of PNL with nerve stimulation, more accurate than old techniques using injection at motor points.

7 VASCULAR IMPAIRMENT AND REVASCULARIZATION FOLLOWING THE PERIPHERAL NEUROLYTIC BLOCK USING DIBUCAINE - A MICRO-ANGIOGRAPHIC AND HISTOLOGIC STUDY. K.Serada, T.Tomaru, Dept of Anesthesiology, Fujigaoka Hosp, Showa Univ School of Medicine, Yokohama, 227, Japan

Aim of Investigation: The aim of this study is to investigate the vascular impairment affecting the peripheral nerve degeneration following the injection of 1% and 2% dibucaine angiographically and histologically.
Methods: 14 rabbits were sacrificed for this study. These rabbits were divided into two groups as follows: On seven rabbits of Group 1, 1% dibucaine was injected into the sciatic nerve. On Group 2 consisted of another seven rabbits, 2% dibucaine was also injected. The opposite sciatic nerve of each animal was used as a control. Microangiography using 25% barium sulfate was performed immediately after these nerve blocks and 2, 4 days, 1,2,4,6 weeks later. After removal these sciatic nerves, vascular changes were observed by Spalteholz's preparations. Histologic sections stained by Masson, hematoxylin and eosin were also studied and compared with angiographic findings.
Results: On angiography immediately after injection, Group 1 disclosed no changes of vascular pattern, however, Group 2 showed avascular formation in part. Histologic sections at that time showed unmyelined fibers and axons swelling and edematous in both groups . On Group 1, no findings suggesting vascular impairment was noted in any term of our series. In contrast, complete revascularization following vascular impairment of Group 2 was formed after 4 weeks. The most remarkable neural degeneration in histologic findings was seen on Group 1 after 2 days and on Group 2 after 1 week.
Conclusions:We concluded that vascular damage of 2% dibucaine markedly occurred, and was prolonged comparing with 1% dibucaine. The neural degeneration injected by 2% dibucaine probably was influenced by impairment of blood supply and its revascularization. It was assumed that 1% dibucaine had direct effect on the nervous tissue and was not influenced of blood impairment.

8 REVIEW OF THE EFFECT OF CHEMICAL LUMBAR SYMATHETIC BLOCK USING A SINGLE NEEDLE TECHNIQUE ON PAIN AND FOOT TEMPERATURE AT 6 WEEKS. L. Hoyle*, J.H. Hughes, S.S. Eldabe*, K.A. Milligan . Pain Management Clinic, South Cleveland Hosp, Middlesbrough, Cleveland, TS4 3BW, UK.
Aim of Investigation: To assess the clinical effects of Chemical Lumbar Sympathetic Blockade (CLSB) using a single needle technique at 6 weeks.
Methods: A total of 23 patients who underwent CLSB using the single needle technique (1) provide the material for this review. All blocks were performed under fluoroscopy using aqueous phenol 6% (mean volume 4.8 mls). The efficacy of the blocks was assessed using clinical signs as well as measurement of pain on visual analogue scale (VAS) and big toe temperature prior to the block as well as 20 minutes and 6 weeks after the block.
Results: In all cases adequate sympathetic blockade was achieved as judged by clinical signs and a significant rise in toe temperature and a drop in VAS at 20 minutes ($P<0.05$). At 6 weeks comparison of the big toe temperature with the preblock values showed a statistically significant difference ($P<0.05$). Comparison of the preblock and 6 weeks VAS showed no significant difference.
Conclusion: A sustained temperature change at 6 weeks may be of benefit to patients with poor blood flow and vascular ulcers. The lack of significance on the VAS may be due to insufficient numbers. The evaluation continues.1.Hatangdi V.S. and Boas R.A: Br. J. Anaesth. (1985),57, 285-9

9 CRURAL PARAPLEGIA FOLLOWING NEUROLYTIC CELIAC PLEXUS BLOCKADE. D. A.Estrada*, J.O.Oliveira Jr, M.Giudicissi F*., F. Ikedo* , C.L.Fukuda*, M.Pavan, (SPON: A.S.Nunes), Hosp Alemão Oswaldo Cruz, São Paulo,01327-010, Brazil
Aim of Investigation: Celiac plexus block (CPB)is one of the few neurolytic procedures still useful for treatment of advanced cancer pain. Some complications, as paraplegia , although rare, can occur. As there are few cases in the literature of such cases, we present the description of one case.
Description of the case: F.D.A.,male, 62 y, ASA III, presented a gastric adenocarcinoma with pancreatic invasion and thoraco-abdominal-lumbar pain, despite the use of oral analgesics. Alcoholization of the celiac plexus was chosen and performed under radiologic guidance and the usual care regarding arterial hypotension. 25 ml of absolute alcohol were injected bilaterally. At the end of the procedure, the patient was able to change by himself to another bed. Three hours later neurological examination showed hypoesthesia below T10 and crural flacid paraplegia . Five hours later the exam revealed anesthesia below T10. The patient did not complain of the paraplegia,once pain relief was achieved. Despite the normal arterial pressure levels and steroids, this picture remained unchanged. The patient refused to undergo further investigation aiming a better elucidation. At the day 15 Babinski sign was present and the sensitive level reached T12 -L1. No other analgesic approach was needed till the death of the patient, which occurred due to sepsis.
Conclusion: We agree with other authors that such a complication can occur due to an intrathecal injection of alcohol or spinal cord ischemia due to a spasm of the Adamkievicz artery (perivascular irritation or direct trauma of the needle in the vessel). Alcohol concentrations higher than 50% seem to increase this risk. We believe that such a tragic complication, although rare, should be always kept on mind and reminded to the patient.