

THORACIC, BUT NON LUMBAR EPIDURAL ANALGESIA FOR POSTOPERATIVE PAIN RELIEF REDUCES THE INCIDENCE AND SEVERITY OF EARLY NON-SURGICAL COMPLICATIONS IN PATIENTS UNDERGOING OPEN RADICAL PROSTATECTOMY

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INTRODUCTION & OBJECTIVES: Methods of pain relief, in particular those which offer both, analgesia and sympathicolysis can attenuate the stress response to surgery. Consequently, these methods have been shown to play a major role in modern clinical pathways, providing superior outcome and facilitating fast track discharge. The most striking results were demonstrated by the use of thoracic epidural analgesia, but not lumbar epidural analgesia. In 1993 a collaborate clinical pathway was established at our institution, including standards for surgery, transfusion regime, postoperative care and postoperative pain relief. The purpose of the underlying study was therefore to evaluate the impact of this method of pain relief on incidence and severity of non-surgical complications in patients undergoing radical retropubic prostatectomy.

MATERIAL & METHODS: The records of 1165 consecutive patients who underwent radical retropubic prostatectomy between 1/1994 and 12/2003 were analysed regarding co-existing diseases and incidence and severity of any kind of postoperative non-surgical complications. Complications were classified from 0-4 (0- no complication, 1- minor complication, not relevant for discharge, 2- need for intervention, possibly relevant for discharge, 3- major complication requiring ICU- or Intermediate Care-admission, 4- fatal complication). Patients received epidural analgesia or alternatively patient controlled intravenous opioid analgesia (PCIA) if contraindications for epidurals existed.

RESULTS: We used 3 different methods of analgesia: thoracic epidural analgesia (TEA), lumbar epidural analgesia (LEA) or patient controlled intravenous analgesia (PCIA). There were no differences regarding demographic data, patient characteristics, duration of surgery, and blood loss between groups. However, cardiopulmonary complications were significantly reduced in group TEA (table) as were minor and major complications at all.

Incidence of early postoperative non-surgical complications				
	TEA (n=831)	PCIA (n=225)	LEA (n=109)	p-value
Cardiac complication	3.0%	6.7%	7.3%	0.01
Myocardial infarction	0.2%	0.9%	0.9%	0.1
Pulmonary complication	2.6%	6.7%	10.1%	0.001
Pulmonary embolism	0.5%	0.5%	0.9%	n.s.
Deep vein thrombosis	0.9%	0.5%	0.9%	n.s.
Neurological	1.3%	1.3%	5.5%	0.06
Delayed mobilisation	1.4%	0.4%	25.7%	0.001
Unplanned ICU-admission	3.0%	7.1%	4.5%	0.01
Compl. Class 1	11.8%	12.2%	23.4%	0.001
Compl. Class 2	3.9%	5.4%	9.9%	0.001
Compl. Class 3	2.4%	4.5%	3.6%	0.01
Compl. Class 4	0	0.5%	0	n.s.

CONCLUSIONS: As compared to LEA and PCIA thoracic epidural analgesia provided a striking benefit in reducing early non-surgical complications as well as unplanned ICU admission in patients undergoing radical retropubic prostatectomy.