

Tabelul 3. Caracteristica bolnavilor conform structurii MODS

Nr d/o	Structura MODS (n=423)	Sepsis tegumentar		Sepsis pulmonar		Sepsis abdominal		Sepsis nefrogen-urologic		Sepsis obstetrical-ginecologic		Sepsis pancreatogen	
		(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
1	disfuncția respiratorie	59	100	41	100	115	100	17	100	6	100	71	100
2	disfuncția cardiovasculară	59	100	41	100	115	100	17	100	6	100	71	100
3	disfuncția neurologică	56	94,9	41	100	101	87,8	17	100	5	83,3	71	100
4	disfuncția hepatică	55	93,2	38	92,7	94	81,7	15	88,2	3	50	71	100
5	disfuncția renală	52	88,1	38	92,7	86	74,8	17	100	4	66,7	71	100
6	disfuncția hemostazică	49	83,1	35	85,4	78	67,8	14	100	6	100	71	100
7	disfuncția intestinală	34	57,6	26	63,4	115	100	10	58,8	5	83,3	71	100
8	disfuncția imuno-nutritivă	51	86,5	39	95,1	115	100	11	64,7	5	83,3	71	100

Analiza conform structurii disfuncțiilor viscerale și sistemice în raport cu localizarea focarului septic declanșator la pacienții cu sepsis chirurgical, care au evoluat clinic cu sindrom MODS a demonstrat dezvoltarea disfuncției respiratorii în 100% cazuri, disfuncției cardiovasculare 100% cazuri, disfuncția neurologică – 83,3-94,9% cazuri, disfuncția hepatorenală – 50-93,2% cazuri, disfuncția – 57,8 - 100% cazuri, disfuncția hemostazică – 67-8-100% cazuri. Gradul cel mai înalt de severitate a scorului MODS se observă în cazul sepsisului pancreatogen, urmat de sepsisul pulmonar, sepsisul abdominal, sepsisul nefro-urologic, obstetrical-ginecologic și cel tegumentar.

Concluzii

În pofida realizărilor medicinei în contracararea proceselor infecțioase și septice, sepsisul continuă să fie o problemă majoră a medicinei prin incidența înaltă a disfuncțiilor poliorganice și polisistemice cu rezultate dramatice.

Coraportul complicațiilor severe ale sepsisului, șoc septic/ MODS este de 1 la 3 în favoarea MODS. Această legitate obligă un monitoring minuțios și aplicarea unui tratament polimodal de substituție a multor funcții vitale și de corecție a disfuncțiilor multiple.

Sindromul disfuncției multiple de organe are un caracter concret bine conturat în dependență de focarul primar al sepsisului.

REGIONAL ANALGESIA IN THORACIC TRAUMA

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The contemporary *multimodal therapeutic approach* to the management of thoracic trauma is intended to decrease patient morbidity and mortality, improve functional recovery and long-term quality of life after trauma. It includes early diagnosis and treatment of injuries, the utilization of minimally invasive surgical techniques (e.g. thoracoscopic surgery, endovascular repair of thoracic aortic injuries), modern lung supportive therapies, physiotherapy, early nutrition and ambulation, and early and adequate pain control. The conceptual shift in the post-traumatic pain management is the result of a better understanding of the role of pain in stimulating the catabolic stress response after trauma with resultant tachycardia, increased oxygen consumption, hypercoagulability, and immunosuppression. The stress response after trauma is even greater than the stress response after elective surgery. It is paramount therefore to initiate a strategy of pain control early (at the point of injury preferably) and continue it throughout the entire hospital stay (in ITU and after that) aiming to decrease the peripheral sensitisation from the injury and the central sensitisation with its subsequent windup. This concept has been called *preventive analgesia* and it is best achieved by capitalizing on the synergistic analgesia offered by various pharmacological agents and regional techniques (*multimodal analgesia*). The experience with multimodal preventive analgesia arises mainly from studies in postoperative patients; however, new data is emerging from the progress that military medical care has made in managing multiple trauma critically ill-wounded soldiers.

Regional anaesthesia-analgesia may play an important role as part of the multimodal analgesia in thoracic trauma patients. It has been shown repeatedly in postoperative studies to offer improved analgesia, superior patient outcomes and better patient satisfaction. Numerous studies report improved analgesia after continuous neuraxial and peripheral regional blocks compared to systemic opioids, and less side effects such as nausea and vomiting, excessive sedation, respiratory depression, urinary retention, postoperative ileus and pruritus. Several patient outcomes such as the duration of ITU-stay, overall hospital-stay, postoperative morbidity (cardiac, pulmonary, ileus, infective complications) and mortality also show improvement with perioperative continuous regional anaesthesia. There is also strong evidence that regional anaesthesia improves patient satisfaction when compared to systemic analgesia. Other long-term patient outcomes such as the prevalence of posttraumatic stress disorders and chronic pain

may be also improved, although it remains unclear whether better analgesia or the choice of analgesic technique is responsible for the beneficial effects.

The advantages of epidural analgesia (regardless of the epidural delivery technique i.e. continuous infusion or patient-controlled) when compared to intravenous systemic analgesia have been well demonstrated in post-thoracotomy patients - the most commonly studied model of thoracic "trauma". Paravertebral analgesia, confirmed to be equally analgesic-effective with thoracic epidural with fewer side effects, and superior to parenteral opioids, may be used in selective cases. There is generally a paucity of prospective randomised controlled studies to evaluate regional versus systemic analgesia in "true" thoracic trauma patients. Several retrospective studies have demonstrated better analgesia with thoracic epidural than intravenous patient-controlled analgesia, and shorter ITU stay in chest trauma patients with multiple rib fracture. In a recent randomised controlled study, continuous thoracic paravertebral analgesia proved to be as effective as continuous thoracic epidural for the pain management in patients with unilateral multiple rib fractures, and they were both associated with similar improvement in pulmonary function.

The potential risks associated with the use of local anaesthetics (toxicity from inadvertent intravascular injection or overdose) can be avoided by using less toxic local anaesthetics as a sole agent or in association with adjunctive analgesics (drugs that enhance the analgesic effect of the primary pain relieving drug, often in a synergistic way, and allow a reduction of the local anaesthetic dose to levels that decrease the risk of toxicity). A scrupulous technique and the immediate availability of the resuscitation equipment and drugs (intralipid) are paramount. A meticulous technique also minimizes some other risks of regional blockade such as nerve injury, pneumothorax, inadvertent epidural or subarachnoid spread, hematoma, and infection.

In conclusion, ongoing improvements in pain management after thoracic trauma include aggressive pain control from the initial point of evacuation and throughout the continuum of care in ITU and hospital wards. There is strong recognition that adequate pain management improves patient outcomes. Whether a specific drug, technique or combination is responsible is less clear, although some techniques are associated with better analgesia and less side effects than other. A multimodal approach is the best, and regional anaesthesia, where suitable, must be considered early in the management of pain control in thoracic trauma patients.

References

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END OF LIFE DECISIONS – PRACTICAL APPLICATIONS OF THE ETHICAL PRINCIPLES OF CONSENT AND PATIENT AUTONOMY

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Introduction

Prior to the mid 1840's, before the advent of anaesthesia, surgical procedures were limited and confined mainly to amputations for traumatic lower limb injuries and drainage of abscesses. With the advance of ether/chloroform anaesthesia, the scope and extent of elective surgery increased dramatically. The landmark US *Schloendorff v Society of New York Hospitals* case in 1914 stated the patient requirements to give consent and the consequences for the surgeon who operates without the patient's consent¹. Judge J Cardozo ruled that "**every human being of adult years and sound mind has the right to determine what shall be done with his own body; and a surgeon who performs an operation without the patient's consent commits an assault for which he is liable in damages**" In the middle of the 20th century society changes had a major impact on the culture and practice of consent. The Nuremberg trials exposed the barbaric nature of Nazi experiments done in the name of medical science when inmates of concentration camps were immersed in iced water to determine how long they would live. This led to the Nuremberg Code adopted in 1947 and the subsequent World Medical Association's Geneva Declaration on consent. Subsequent Declarations included Helsinki (Research), Sydney (Organ Donation) and Tokyo (Torture).

Patient consent is one of the most complex and evolving considerations in clinical practice. Consent can come in different guises. It may be expressed or positively affirmed in writing or may be implied by the conduct or silence of the person whose

¹ *Schloendorff v Society of New York Hospitals* (1914) 211 NY 125. Landmark US case developed the use of patient's rights language in relation to the obligation to obtain patient consent for surgical procedures.