



Postoperative Pain Management in the Maxillofacial Region – How we do it?

Bicsák*, Á. MD., DMD., Schanbacher* M. MD., Reinbacher*, K. E. MD., DMD., DMD., Pichler B. Mag.#, Sandner-Kiesling A. Prof. MD.‡, Kärcher* H. Prof., MD.
 * Department of Oral-, and Maxillofacial Surgery, University Hospital Graz, Medical University of Graz, Graz, Austria, Head of the Department: Univ. Prof. DDr. Hans Kärcher
 # Dept. for Quality Management, Krankenhausgesellschaft der Steiermark
 ‡ Project Lead for Pain Therapy Qualifications, Clinics of Anesthesiology and Intensive Medicine
 Correspondance: akos.bicsak@meduni-graz.at / monika.schanbacher@medunigraz.at

Background

2007 initiation of the project 'Optimization of the Management of Acute Pain' at the University Hospital Graz. 2011 qualification and evaluation of pain therapy at the Department of Oral- and Maxillofacial Surgery (evaluation based on comparison with German clinics referred to as 'Reference Clinics').

Materials and Methods

Written, anonymous questionnaires were used to assess patient. Staff was interviewed by web-based questionnaire. Data collected were demographics, general conditions, diagnosis, operation, art of tumor if applicable and pain medication. Evaluation was performed by standard statistical methods as t-test, ANOVA or Chi²-test.

Pain Medication Protocol

- Used at the Department of Oral- and Maxillofacial Surgery at the University Hospital Graz

Operation	Basis medication			Pain prevention, pain medication as per patient needs (Pain VAS ≥3 while resting ≥5 by strain)	
	OP Day	1. postop. Day	Thereafter	OP Day	1. postop. Day and thereafter
Step 1	Orphenadrine + Diclofenac 2x250ml iv	Mefenamic acid 3x500mg	Mefenamic acid 3x500mg	Alternative: Metamizole sodium 3x1g iv. within 30 min	Metamizole max. 4x20 drops (500mg) p.o.
	Alternative: Metamizole sodium 3x1g iv. within 30 min	Alternative: Metamizole sodium 4x500mg p.o.	Alternative: Metamizole sodium 4x500mg p.o.	Alternative / Additive: Tramadol max. 3x100mg iv. with antiemetics	Alternative / Additive: Tramadol max. 3x500mg iv. with antiemetics
Step 2	Orphenadrine + Diclofenac 2x250ml iv + Dexamethason 8mg i.v.	Orphenadrine + Diclofenac 2x250ml iv	Mefenamic acid 3x500mg	Metamizole sodium max. 3x1g iv. within 30 min	Metamizole max. 4x20 drops 500mg) p.o.
	Alternative: Metamizole sodium 3x1g iv. within 30 min. + Dexamethason 8mg i.v.	Alternative: Metamizole sodium 4x500mg p.o.	Alternative: Metamizole sodium 4x500mg p.o.	By persisting pain, as alternative / additive: Piritramide max. 4x7.5mg in 100ml NaCl in 30min.	
Step 3	Orphenadrine + Diclofenac 2x250ml iv + Dexamethason 8mg i.v. + Piritramide 7.5mg in 100mL NaCl in 30 min. i.v.	Orphenadrine + Diclofenac 2x250ml iv + Dexamethason 8mg i.v.	Orphenadrine + Diclofenac 2x250ml iv	OP-Day until 5. postop. Day and thereafter	
	Alternative for NSAID: metamizole 3x1g iv. in 30 min.			By persisting pain, as alternative / additive: Piritramide max. 7.5mg in 100ml NaCl in 30min.	
All above data for patients above 50kgs. (Metamizole (EUR) equals dipyrone (US).)			By persisting pain surgeon on duty is to be informed! Metamizole sodium 20 drops equal to 500mg tablets.		

Results

Safety and efficacy of pain medication: 86.2% of patient received painkillers, among them 96% were satisfied with the applied therapy. 72.4% of patients observed no side effects.

Other results are summarized in section Discussion and Conclusions.

Discussion and Conclusions

In comparison with reference clinics, a better pain control leads to improved safety, efficacy and patient satisfaction. Most patients report pain to nursing staff when they start feeling pain (not significant). All staff is aware of the pain therapy protocol. Most members of staff use other methods (without use of painkillers) of pain therapy. In most cases, staff results are above reference institutions about satisfaction, communication and training.

	Own clinic		Reference institutions	
	Conservative	Operative	Conservative	Operative
Female	0	51.7% (n=15)	0	53.1% (n=1405)
Over 70 y.o.	0	3.4% (n=1)	0	26.3% (n=691)
Malignancy	0	6.9% (n=2)	0	15.5% (n=369)
Reduced general condition	0	3.4% (n=1)	0	8.7% (n=230)

Table 1. Demographics

Group	Pain situation at completing the questionnaire	Pain medication administration history	Own clinic	Reference institutions
Operative	Pain	Analgetics received	55.2% (n=16)	93.5% (n=2478)
		No analgetics	0	6.5% (n=171)
	No pain	Analgetics received	44.8% (n=13)	0
		No analgetics	0	0
Total operative			29	2649

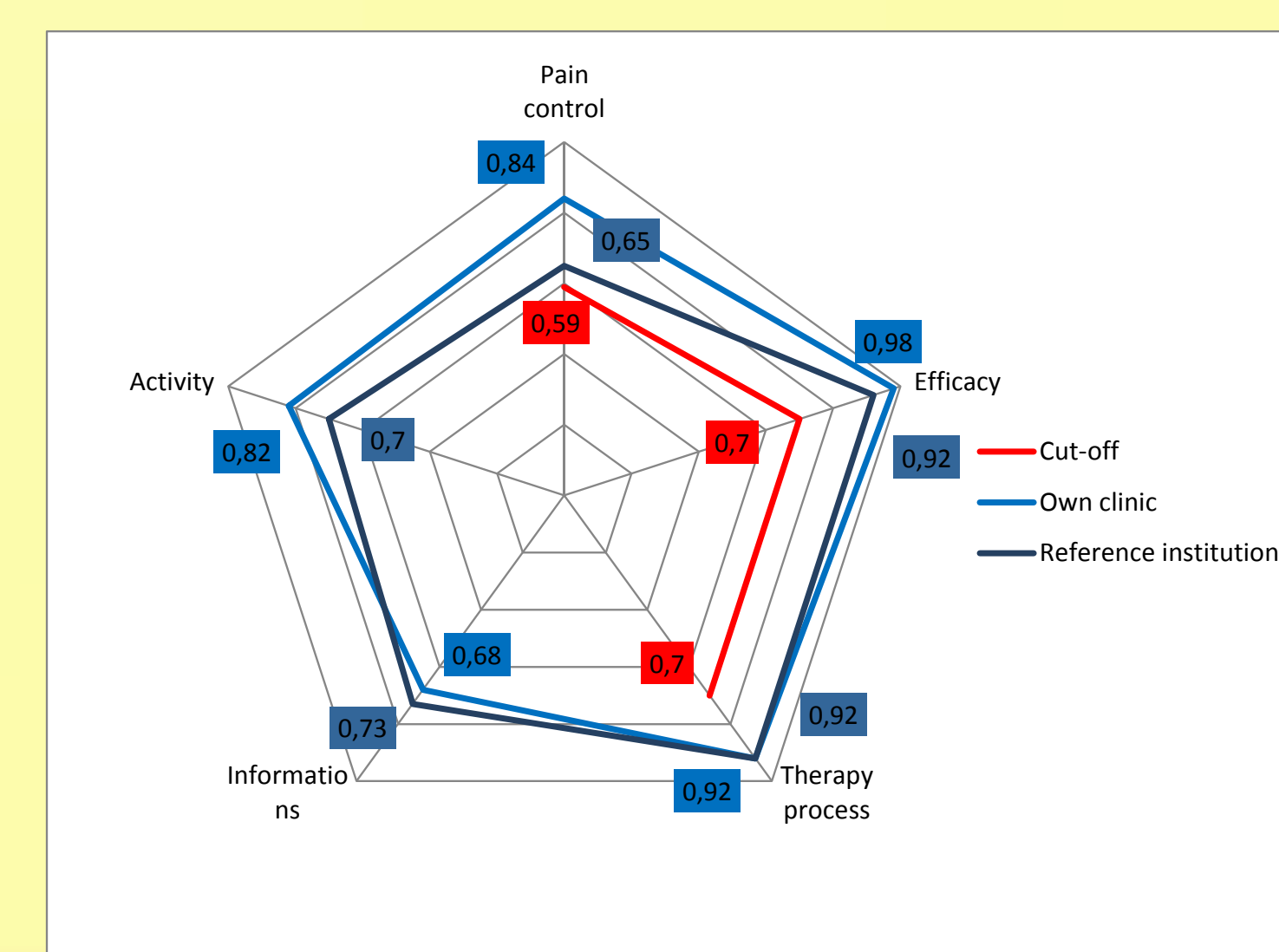
Table 2. Occurrence of postoperative pain

Operative		Own clinic	Reference institutions
	Analgetics received	86.2%	92.2%
	Effective	96%	83.7%
	Too short effective	0%	7.8%
	Too less effective	4%	8.2%
	No effects	0%	0.3%

Table 3. Analgetics administration frequency and efficacy.

Group		Own clinic	Reference institutions
Operative	Rest pain too high	10.3% (n=3)	20.7% (n=545)
	Pain at load too high	6.9% (n=2)	34.5% (n=897)
	Maximal pain too high	13.8% (n=4)	38.6% (n=1012)

Table 4. Subjective pain measurements



Graph 1. Comparison of pain therapy safety and efficacy with reference clinics regarding pain control, therapy efficacy and protocol related quality assurance data

After successful evaluation of the applied pain therapy the certification of high quality pain therapy was granted.

References

- Projekt: Akutschmerzmanagement am LKH-Universitätsklinikum Graz Ergebnisbericht über die MitarbeiterInnen- und PatientInnenbefragung der Univ. Klinik für Zahn-, Mund- und Kieferheilkunde Klin. Abteilung für Mund-, Kiefer- und Gesichtschirurgie im Rahmen des Zertifizierungsverfahrens „Certkom - Qualifizierte Schmerztherapie“
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Adequate Pain Control Certified by:

