Preface

Pain is the most frequent cause for patient–physician contact. The patient expects rapid relief and freedom from pain. The more efficient the relief, the more successful the physician is felt to be.

Besides elimination of pain-producing causes, elimination of pain itself is the ultimate ambition of therapy. This should take place rapidly, with few side effects, simply, and at little cost.

Pain treatment through local anesthetics is one of the most efficient and fastest-acting pain treatment options. A prerequisite is knowledge of the exact techniques and indications, as well as the risks. Injections are invasive procedures and require precise execution. Pain symptoms and patterns encountered in daily practice are manifold and often difficult to associate causally. Among the various pain patterns that present themselves in daily practice, some typical, constantly recurring patterns emerge. The typical clinical pain pattern allows exact assignment of a suitable injection treatment.

In this book, physicians will find symptom-oriented "cookbook-style" directions, which provide easy recognition and indication of the approach. Both circumscribed pain of singular origin and complex pain syndromes can be managed effectively and rapidly.

Owing to the great number of didactical illustrations, it is possible to perform injection treatments with little preceding experience. Risks are discernible in regard to technique and location and concomitant treatments are listed. This enables the practitioner to rid the patient of pain in a fast, efficient, and low-risk manner.

Juergen Fischer
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Treatment through the Skin

“Crown of Thorns”

**Indications**
- Chronic headache of unknown origin, as well as tension headache
- Adjuvant treatment in the case of vegetative dysfunctions, cerebral circulatory disorders, and pain following concussion

**Material**
- Local anesthetic: 3 mL
- Needle: 0.4 × 20 mm

**Technique**
- Along the line of the greatest head circumference, injections are performed every 3 cm; 0.5 mL of a local anesthetic is injected each time. Part of the injectable is placed as a quaddle and the rest is injected into the scalp after the needle has been advanced a further 2–3 mm.

**Risks**
- None

**Concomitant Therapies**
- Depending on the indication regarding tension headaches, special relaxation techniques apply, for example, progressive relaxation technique according to Jacobson and biofeedback therapy.
- Transcutaneous application of essential peppermint oil along the forehead and on the parietal area

| ++ |
| R 2–3 times a week, up to 6 weeks |
| MR, BFB, Med |
Primarily indicated injection points
Area of pain distribution

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Intra-articular Therapy

Shoulder Joint (Glenohumeral Joint)

Indications
- Idiopathic or posttraumatic arthritis
- Capsulitis
- Frozen shoulder

Material
- Local anesthetic: 10 mL
- Needle: 0.9 × 70 mm

Technique
- The needle is inserted from the posterior aspect of the shoulder. To locate the site, the patient is seated with the arm hanging down, bent at the elbow, and the forearm is held in front of the abdomen. The thumb of the practitioner's free hand palpates posteriorly the edge of the acromial angle. The index finger palpates anteriorly the coracoid process and remains on its tip.
- The insertion takes place 1 cm inferior to the thumb mark, with the needle tip pointing toward the index finger.
- The injection can be done smoothly and without pressure if the needle is inserted correctly into the intra-articular space. Increased pressure during the injection indicates misplacement of the needle.

Risks
- Injection into the axillary artery and anesthesia of the axillary plexus if the needle is inserted too deep and too far medially. It is therefore important to insert the needle toward the index finger that rests on the tip of the coracoid process and to remember to perform aspiration prior to injection.

Concomitant Therapies
- Manual traction mobilization
- Cryotherapy
- Positioning of the arm in abduction
- Administration of nonsteroidal antirheumatic agents with systemic effect

| +++ |
| R 1–2 times a week |
| PhysApps, ThE |

Intra-articular Therapy

Acromion

Coracoid process
Interscapular Pain

Indications
- Interscapular pain
- Thoracic syndrome accompanying obstructive respiratory disorders, for example, bronchial asthma

Differential Diagnoses
- Affections of the pleural dome
- Cardiac disorders

Material
- Local anesthetic: 5 mL
- Needle: 0.6 × 30 mm

Technique
- A vertical line is drawn 3 cm lateral to the spinous processes. Along this line, the needle is inserted vertically every 2 cm.
- At each site, an intracutaneous quaddle containing 0.5 mL of a local anesthetic is set, then the needle is advanced 1 cm and a further 0.5 mL of a local anesthetic is injected. Injections follow the pathway of the bladder meridian.

Risks
- If the needle is advanced excessively, there may be the rare occurrence of a pneumothorax, especially at the vertex of the kyphosis; therefore, the depth of insertion must be observed.

Concomitant Therapies
- Local warm peloid application, combined with mobilization of the subscapularis and lateral traction mobilization
- Relaxation massages, acupuncture treatments
- Hot jet blitz to the back, according to Kneipp
- Chiropractic therapy

| ++ |
| R 3 times a week, up to 8 weeks |
| PhysApps, ThE, Met, Chiro |
Complex Pain 93

- Primarily indicated injection points
- Area of pain distribution

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