ARKADA’S METHOD VERSUS ORTHONYXIA CLAMPS

Podologic treatment applies nail plate correction methods generally described as orthonyxia.

This definition was created with the use of two Greek words: ‘orthos’ which means ‘straight’ and ‘onyx’, translated as ‘nail’. The objective of orthonyxia is to lift the edges of ingrown toenails and straighten the nail plate.

The basic procedure of ingrown toenails treatment is to fit especially designed clamp on the nail plate.

In Arkada’s Method the affected toe is stabilized in the Arkada’s Cube- an innovative medical tool and then with the use of the tools (hooks and blades) gently and painlessly shape the nail plate which is then fixed with some special acrylic mass created by Arkada international laboratories. As a result, the pain disappears immediately and the patient begins to feel much more comfortable. The correctly applied acrylic mass which cures due to the chemical reaction, rises up the nail plate giving it the correct growth direction.

Particularly important factor that differentiates Arkada’s Method from other treatments is that the nail plate is corrected on the entire surface in contrary to the clamps that work at just one spot at a time.

Moreover the contraindications to carrying out the orthonyxia procedures are fragility, the lack of flexibility and the lack of growth of the nail plate as well as non-adherence to the specialist’s instructions. In Arkada’s Method the lack of nail growth, too little flexibility or its fragility are not contraindications. On the contrary, this method hardens the nail plate, supports its growth and gives it an aesthetic look.

SURGICAL EXCISION

This procedure is carried out with a local anesthesia. The ingrown toenail is excised on its entire length, usually together with its matrix. The postoperative wound can be stitched or ‘closed’ with the use of Steri Stripe patches.

COMPARISON OF SURGICAL EXCISION AND ARKADA’S METHOD

<table>
<thead>
<tr>
<th>SURGICAL EXCISION</th>
<th>NAIL RECONSTRUCTION WITH ARKADA’S CUBE</th>
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<tbody>
<tr>
<td>Toe anesthesia is required</td>
<td>Toe anesthesia is only required on patient’s individual request or in the case of the excision of granulation tissue.</td>
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<td>The ingrown toe nail is excised together</td>
<td>There is no necessity of toe nail excision,</td>
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with its matrix and the outgrown nail fold | the cut out portion of the nail is reconstructed with the acrylic mass
---|---
Done with the use of surgical instruments | Done with the use of a medical instrument
-Arkada’s Cube
The wound healing takes 7-14 days | No wound unless the granulation tissue is excised
Due to the wound there is after treatment pain | The pain caused by an ingrown toenail is eliminated directly after the treatment
The patient may need to use painkillers | The treatment is painless
There is necessity of changing the wound dressings | No wound dressings
The toenail will be narrower | The toenail size remains the same
There will be a scar on the nail fold skin | No scar on the nail fold skin
Radical excision removes the outgrown nail fold skin | The outgrown nail fold skin disappears gradually
Good aesthetic look after the wound is healed | Very good aesthetic look immediately after the treatment
Relapses may appear | In some cases it may be necessary to complete the toenail with acrylic mass

**ARKADA’S METHOD PROCEDURE**

This treatment may be carried out with local anesthesia done by a medical doctor or without any anesthesia at all. The local anesthesia means providing the medicine in the toe area, similarly to the dental anesthesia.

The procedure consists of several phases:

1. Preparing the toenail before the procedure.
2. Exposing the edges of the ingrown toenail in the Arkada’s Cube.
3. Reconstruction of the nail.

If the procedure is done under the anesthesia, the granulation tissue may be also excised.
If there is no necessity of granulation tissue excision, there is no necessity of wound dressing and the patient may wash their feet after the procedure. If the granulation tissue is excised, the toe may be washed the day after the procedure.

**THE REASONS OF INGROWN NAILS**

The main cause of ingrown nails are genetic factors and disorders of microcirculation in the course of various vascular diseases as well as improper nail cutting technique. The risk of this disorder also increases when the toe is damaged and ill-fitted shoes are worn. Ingrown nails are also the cause of orthopedic deformities such as hallux valgus or valgus foot, flat feet or incorrect gait motility.

Another factor contributing to ingrown nail is obesity that alters the biomechanics of the foot which changes the setting of the toes’ angles. The basic symptoms of the ingrown nail are swelling, redness and soreness of the nail folds. Initially the pain is diagnosed by the touch and then it becomes constant. Then, as the nail continues growing into the surrounding soft tissues, the inflammation appears and consequently the pathological formation of granulation tissue also known as ‘proud flesh’ may appear. Untreated, the inflammation can lead to bacterial and mycotic infections, which penetrating deep into the tissue cause paronychia and even inflammation and osteonecrosis of the big toe.

Measures that doctors or podologists should take is patients education and ingrown nails prevention.

**PODOLOGICAL METHODS FOR INGROWN NAILS PREVENTION**

1. Patient education about the causes of ingrown nails.
2. The elimination of factors which cause the nail changes (mainly the treatment of systemic diseases).
3. Wearing appropriate footwear, correctly adjusted both to the length and width of the foot.
4. Correct toenail trimming and care.
5. Wearing orthotics correctly adjusted to the foot deformities.
6. Taking care of nail folds by inserting antiseptic tampons into the medial and lateral edges of the nail plate.
7. Application of plastic tubing on the edges of the nail. This treatment protects the nail folds from getting damaged by nail sharp edges.
The anatomy of the nail plate

A nail (unguis) is one of the skin appendages (adnexa cutis), which is produced by the skin epithelium. The nail unit consists of items such as: matrix, which is the core of the nail plate, nail bed and paronychium - the border tissue around the nail. The main structures of the nail plate are the matrix and the nail bed. The matrix is a place where cells divide and as the callous cells build up, they slide on the nail bed creating the nail. The tissues located directly under the nail plate create the nail bed which is the place in which the nail nutrition follows thanks to an extensive microcirculation network.

Nail growth occurs continuously throughout life. On average, the rate of nail growth is 0.1 mm per day, while it is faster on the fingers than toes. Nails grow fastest between the age of 5 and 30. The total regrowth of the nail plate is produced within 3 - 6 months. The slowdown is mainly in elderly people or in the case of various systemic diseases. Nail growth depends on the degree of damage caused by the microcirculation diseases.

A healthy nail plate is shiny, smooth, flushed with convex surface. The growth and health of the nail plate’s determined by the matrix and the nail bed. The matrix and the nail bed do not have their major blood vessels. The main source of nutrition of these anatomical structures is the microcirculation and the condition of the nail plate depends directly on the microcirculation. Diseases that cause microvascular damage cause changes in the nail plate which become visible only after some time, as the nail plate grows.

These changes may be temporary, but sometimes they become permanent. Nail changes are apparent in the course of various diseases such as diabetes, hypertension, chronic venous insufficiency, renal lymphatic system disorders, metabolic diseases, injuries and inflammations (viral, bacterial, mycotic). Nails may then become a reflection of the health of the human body. Another pathological medical condition of the nail plate causing severe pain is the ingrown nail.