TOE AMPUTATION IN MACRODACTYLIES

ABOUT 3 CASES OF NEUROFIBROMATOSIS & MACRODYSTROPHIA LIPOMATOSIS

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Isolated macrodactyly = Hamartoma

Slow, progressive unilatéral overgrowth of all mesenchymal elements

2 types: static or progressive (Barsky)

- etiology: 2 hypothesis in macrodactyly
  - Brook & Lehman 1924
    - Neurofibromatosis
  - Feriz theory 1925
    - Progressive Macrodystrophy lipomatososa
Case 1

Man – 36 years old

Difficulties to shoewearing – no pain
Stiffness of the 2nd MTP

Already operated 1 time on the second toe
and 1 time on dorsal face of the ankle
Histological finding: **neurofibromatosis**

No obvious Von Recklinghausen disease:
Only 1 café-au-lait spot.
Clinical aspects

- Skin lesion on the second toe and the lateral side of the first toe
- MTP2 tumefaction
X ray

2nd toe phalangeal hypertrophy
MRI aspect

Fibromatosis on MTP2
Treatment: Double crossing flap

before

2nd toe flap
Divided in two parts

Resected area

after

Plantar part

Dorsal part
2nd toe amputation with the lateral skin of the great toe

Skin reconstruction with a crossing flap from the lateral side of the second toe
Histological findings

neurofibromatosis
Results
6 months after
Clinical aspects
Case 2

- Man 31 years old
- 2nd & 3rd toe macrodactyly
- Difficulty of shoewearing
- No pain
- No previous surgery
Clinical aspects

- No skin modification
- IP & MTP3 ankylosis

Typical plantar mass
X ray aspect

- IP fusion
- Phalangeal hypertrophy & dystrophy
- MTP3 dystrophy
MRI

Lipomatosa infiltration

Plantar aponevrosis

P1 + P2 Hypertrophy & IP fusions
Case 3

Woman 30 years old

Macrodactyly of the 2nd and 3th toes with stiffness and chronic infection of the second toe

Difficulties to shoewearing – no pain

3 times surgery on the 2 toes before
X ray aspect

Phalangeal & metatarsal head dystrophies

Interphalangeal fusion
Treatment

2nd toe amputation with partial resection of the 2nd phalangeal of the 3rd toe
Intraoperative findings

Fibrolipomatosa tissu
Histological findings

Macrodystrophia lipomatosis
DISCUSSION

Not 2 hypothesis

But 2 etiologies
DISCUSSION

Why to separate this both etiologies?

Prognostic

- **fibromatosis**: 2 to 5% sarcomatous degeneration
- **lipodystrophy lipomatosus**: no degenerative change
DISCUSSION

Congenital but no hereditary transmission
DISCUSSION

treatment

2 aims:

- Keep a good foot function
- Avoid recurrence
DISCUSSION

- **Bone and tissue resection**
  - Epiphysiodesis
  - → recurrence

- **Transmetatarssal amputation**
  - → less functional

- **Toe or ray amputation**
  - → less recurrence
  - & more function
CONCLUSION

Isolated macrodactyly

2 etiologies

- neurofibromatosis
- macrodystrophia lipomatosi

Treatment:

- ray amputation

functional & less recurrence
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