EXCISION OF A CHEST WALL PLEXIFORM NEUROFIBROMA AND CHEST WALL RECONSTRUCTION: A CASE REPORT

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Introduction

• Primary or metastatic chest wall tumours infiltrate all layers

• Surgery poses technical problem

• Before any resection, careful planning of reconstruction possibilities is mandatory

• The aim is to present our experience with excision of a chest wall plexiform neurofibroma and reconstruction
Case report

- 24 year old farmer
- Anterior chest wall mass and multiple truncal skin nodules since childhood
- Mass was painless not associated respiratory symptoms
- Skin nodules are not associated with itching
- No hearing or visual impairment
- No family history of similar problems
• O/E – wide spread subcutaneous of varying sizes, widespread café ulait spots
• Chest wall mass measuring 16X14X8cm, hyperpimented skin, firm – hard and fixed to anterior chest wall
• Vesicular breath sounds bilaterally
• CXR – cortical destruction of the sternum
  - no intrathoracic extension
• CT scan – not done
Preoperative on the operation table
Mass exposed
Defect after excision
Estimated size of the defect
Methylmethacrylate sandwiched in prolene mesh
Methacrylate secured to the defect
Estimated size of VRAM
Flap raised
Defect covered
Immediate post-op
One month post-op
Discussion

• Plexiform neurofibromas are benign nerve tumour
• Usually congenital but may present during the first year
• Generally painless slow growing neoplasms
• Most are asymptomatic
• Have potential for transformation
• Unfortunately, there is no effective medical treatment for PNF

• Current management is limited to surgical resection

• Decision about surgical management must be made judiciously

• Multidisciplinary approach is advocated
• After chest wall resection, skeletal reconstruction when appropriate and skin coverage are essential elements.
• Reconstruction is important to:
  ➢ Maintain adequate ventilation
  ➢ Protect the heart and great vessels from trauma
  ➢ Maintain cosmetic integrity
New Trends in Skeletal Reconstruction after Resection of Chest Wall Tumors

Patricia McCormack, M.D., Manjit S. Bains, M.D., Edward J. Beattie, Jr., M.D., and Nael Martini, M.D.

- First report on the use of sandwich technique
- Since then it has been used worldwide
Reported excellent physiologic and aesthetic success with methymetacrylate
Workhorse Flaps in Chest Wall Reconstruction: The Pectoralis Major, Latissimus Dorsi, and Rectus Abdominis Flaps

Karim Bakri, M.D.,¹ Samir Mardini, M.D.,¹ Karen K. Evans, M.D.,² Brian T. Carlsen, M.D.,¹ and Phillip G. Arnold, M.D.¹

Versatility of various flaps for chest wall reconstruction
• Managed with plastic surgeons
• We used rigid coverage because vital structures were exposed after excision
• Vertical rectus abdominis myocutaneous flap was used to provide coverage
Conclusion

• Excision poses two challenges
  ➢ Defect
  ➢ Cosmesis

• Used of sandwich technique and soft tissue closure with myocutaneous flap can overcome these challenges
References


