



ORIGINAL RESEARCH PAPER

Breast Surgery

CASE REPORT ON MANAGEMENT OF UPPER LIMB WEAKNESS AFTER A MODIFIED RADICAL MASTECTOMY

KEY WORDS:

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INTRODUCTION:

The brachial plexus is formed by the the ventral rami of the C8-T1 nerves.This plexus is responsible for the motor and sensory supply of the muscles of the upper limb.the roots join to form trunks which divide and form trunks,divisions and cords as they pass through the neck into the axilla.In the posterior triangle of neck,the roots join to form trunks as they pass between the scalene muscles,further dividing into divisions as they cross the triangle laterally and form cords as they enter the axilla.This neuronal bundle is covered with fascia throughout its course and thus cannot withstand shearing forces.

Even though during mrm, injury to the brachial plexus is rare,it can occur in instances of improper positioning of the arm, over abduction of the arm or even while shifting of the patient post surgery (over-enthusiastic dissection,rough handling of structures,post op edema) Here we are presenting a case of post left sided mrm upper limb weakness, presenting on post op day 0,which happened to recover after a few months of physiotherapy.

CASE REPORT: A 50 year old female patient was referred to our surgical Opd with complain of lump in the left breast, that she noticed 6 months back.The lump grew in size over the period of 6 months.She had no other co-morbidities or significant family history.H/o open appendectomy 20yrs back,menopausal since 10yrs.

O/e- 2 lumps were present

I. approximately 2x2 cm sized lump with ill defined margins in the left upper quadrant of left breast,with irregular surface,hard consistency, and no attachments to overlying skin or underlying muscles.

II. Approximately 4x3 cm sized lump with ill defined margins between the anterior and posterior border of left axilla,with irregular surface,and hard consistency.

The nipple areola complex was found to be normal. The right breast examination was also normal. The arms of the patient had no weakness in the pre-operative period.

PRE-OPERATIVE INVESTIGATIONS:

INVESTIGATION	FINDINGS
MAMMO-SONOGRAPHY OF BOTH BREASTS	Mammogram-irregularly shaped lesion without internal calcification or architectural distortion in left axilla. USG- approximately 19x47x37mm irregular bordered heterogeneous hypoechoic lesion with internal vascularity and sub capsular flow. Another approximately 13x20x15mm sized lesion with similar characteristics noted adjacent to above. Findings more in favour of metastatic lymphadenopathy.

Doppler of b/l upper limb	All vessels show normal Color flow and spectral waveform.
FNAC	Malignant lesion consistent with clinical diagnosis of possibility of metastatic ductal carcinoma of breast.
TRUCUT BIOPSY	Lymphoid tissue on fibrofatty background. No evidence of Koch's or malignancy.

PROCEDURE-

After positioning the patient with her left shoulder elevated,arm abducted and extended,an elliptical incision of approximately 15cm was kept.

Upper and lower flaps created.Extensive fibrosis present in the lower flap which was cut.

Fatty tissue of breast along with the Tumor dissected from the underlying clavipectoral fascia and pectoralis muscle.

The intercostobrachial nerve,nerve to serratus anterior,axillary artery, lateral thoracic artery were all safeguarded.

A necrotic node was present along the axillary vein which was carefully dissected out and removed.

Negative suction drain kept in flap and axilla. closure done in 2 layers.

Patient was then repositioned to neutral position and after extubation and shifted to ward.

POST OPERATIVE COURSE:

DAY	VITALS	EVENT	MANAGEMENT
0	6pm pulse-70 bpm Bp-120/70 Spo2-100% on room air	Tingling sensation over the left fingers and forearm D/o-50 cc hemorrhagic	Started all orally after 6hrs of surgery
1	6am- p- 82bpm Bp-110/70 Spo2-100 on room air	Weakness of left upper limb with difficulty to start abduction of arm,inability to flex the elbow and extend the wrist against gravity.patient able to move and flex fingers. sensation remain normal D/o-100cc hemorrhagic	Inj. Methyl prednisolone 200mg given stat. Inj calcium gluconate 10cc given 12hrly

2	6am-p-88bpm Bp-110/79 Spo2- 100% on room air	Weakness of left upper limb persists D/o- 40cc hemorrhagic	Tab.prednisolone 5mg qds Inj calcium gluconate 12hrly Tab tamoxifen 20mg hs started Physiotherapy regime started
3	6am-p-82bpm Bp-126/80 Spo2-100% on room air	Weakness persists D/o-60cc serous	Tab pregabalin 75mg hs Tab neurobion forte bd started.

On post op day 6 flap drain removed.
Axillary drain removed on pod 10.

POST-OPERATIVE INVESTIGATIONS:

DATE	INVESTIGATION	FINDINGS
31/5/22	X-ray L shoulder-Ap/oblique	Bones and joints under vision appear normal
31/5/22	X-ray cervical spine	No e/o cervical rib, visualised nad
8/6/22	Doppler study of left upper limb	All vessels have normal Color flow and spectral waveform.
13/6/22	MRI BRACHIAL PLEXUS	Necrotic axillary lymph nodes, largest measuring 20x34mm Tarlov cysts at roots of C8 and D1 on left side, largest 7x7mm at D1.
16/6/22	CECT ANGIOGRAPHY OF HEAD AND NECK	Normal appearance with p/o hypoplastic left vertebral artery.
17/6/22	EMG-NCV	CMAP of lt. Axillary, lt. Infrascapular, lt. Dorsal scapular, lt. musculocutaneous nerve reduced more than 50% compared to Rt. Side. Findings s/o electrophysiologic evidence of partial left sided brachial plexus injury involving C-5 C-6 nerve roots
31/5/22	Biopsy of operated mass	Histology of invasive ductal carcinoma with medullary like features and involvement of base. 4/5 lymph nodes positive for Tumor cell TNM- T2N2aMx

CONCLUSION:

In the case of mrm, any post operative upper limb weakness occurring can most probably be due to a result of either a pre-existing condition getting aggravated or improper shifting of the patient. It might rarely be due to the actual surgical

procedure as the dissection plane is below the level of the brachial plexus.

The investigations post operatively should cover the bone anatomy, the vasculature as well as the nerve conduction and muscle strength to sequentially rule out the possible causes.

The early detection of the weakness and taking proper steps in the management of the same are crucial not only for the physical well being of the patient but also his/her emotional well being.

Here we would like to highlight the role of physiotherapy as well in helping the patient to recover fully from the ailment.

IMAGES:

Post-operative day 2:



patient unable to flex her elbow, supporting the same with other arm



Inability to abduct the shoulder with the shoulder hanging lower

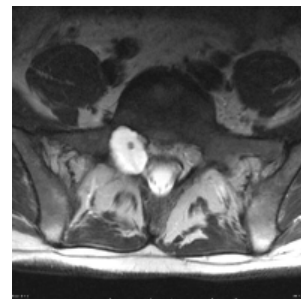
Post physiotherapy sessions for 1 month



Abduction at shoulder without any support



Flexion of the elbow and the wrist possible



MRI image of a Tarlov cyst

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