An in-Depth Look at Fat Necrosis

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Abstract Text:

Purpose: Fat necrosis and foreign body reaction are challenging dilemmas post breast fat grafting. The minimally invasive microdebrider can be used for fat necrosis removal. Improper handling of fat grafting leading to foreign debris with fat necrosis is highlighted as well.

Methods: A 27 year old female underwent bilateral breast fat grafting (abroad) in a foreign centre which produced symptomatic palpable lumps. A 3 year post procedure MRI showed bilateral discrete fat necrosis and oil capsular lumps I, largest being 3 by 5 cm. She underwent debridement of bilateral fat necrosis using a microdebrider (Medtronic). Histology confirmed fat necrosis with reactive chronic inflammation and foreign debris with xanthogranulomatous reaction. This was unusual because foreign material is typically not present during fat injection. Post operatively, despite having reduced in size, the patient wanted complete removal and she subsequently agreed for open excision.

Discussion

Fat necrosis is a benign nonsuppurative inflammatory process of adipose tissue. Typical MRI features are that of lipid cysts with hypointense T1 signals. The microdebrider is a powered, rotary shaving device with continuous suction that is well established for use in functional endoscopic sinus surgery (FESS) for excision of nasal polyps. We have previously reported its use in gynecomastia and accessory breast removal. The only scar is a 3mm port site in the ipsilateral anterior axillary line. Literature on microdebrider fat removal is limited and we share our experience in this case report. We also illustrate the presentation of fat necrosis histologically from specimens obtained from both the microdebrider and the open excision.

Conclusion

Microdebridement of fat necrosis can be considered in the surgical armentarium even for bigger lumps up to 5cm. We show the images of fat necrosis and we discuss our management. Careful harvest and grafting of fat to avoid foreign debris related granulomas is re-emphasised.