Composite polypropylene mesh removal following chest wall resection and reconstruction

When, why and how

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Background: monofilament polypropylene mesh plus resinous material is one of the most used rigid prosthesis for chest wall reconstruction after chest wall resection for neoplastic disease.

Aim: to assess indications to chest wall prosthesis removal, technique and postoperative outcome

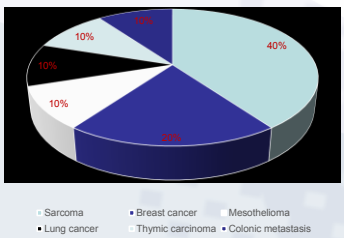
Patients

166 consecutive patients underwent chest wall resection and reconstruction by rigid prosthesis in a 18-year period.

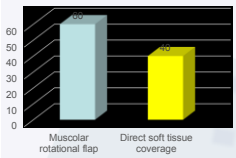
Among them, 10 patients ***(6.0%)*** required prosthesis removal; 5 male patients (50%); mean age: 59 (27-73).

Mean interval time between 1st procedure and prosthesis removal was 15.4 months (1-161).

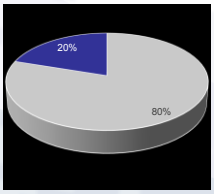
Neoplastic disease



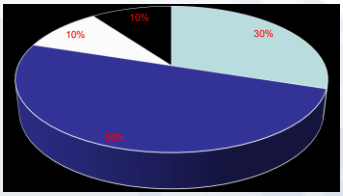
Prosthesis coverage

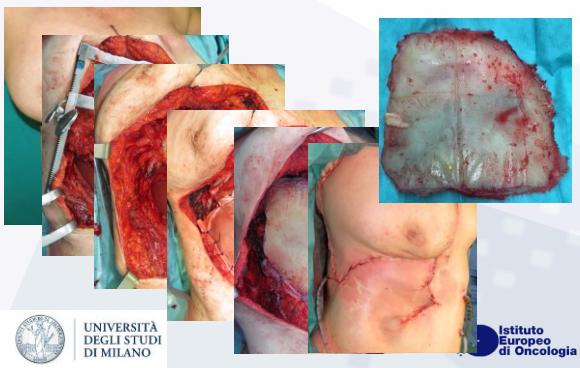


Indications to removal



Reconstruction following prosthesis removal





Results

Mean procedure duration was 179 minutes (39-446).

Post operative course was uneventful in 9 cases (90%); in 1 case we observed flap dehiscence (10%).

Mean total length of stay was 7 days (1-17).

Patient	Age	Sex	Treatments after 1st implant	Indication for removal	Interval time (months)	Reconstruction	Length of hospital stay
1	35	Male	Radio	Recurrence	37.1	Gore-tex®	6
2	27	Male	Radio	Infection	21.2	None	7
3	42	Female	Chemoradio	Infection	9.1	Vicryl	6
4	65	Male	None	Infection	1.0	Vicryl	17
5	64	Female	None	Infection	9.5	None	1
6	62	Female	None	Infection	7.4	None	7
7	43	Female	Radio	Recurrence	161.3	Rigid	8
8	71	Male	Chemoradio	Infection	32.9	None	6
9	73	Male	Chemo	Infection	80.0	Vicryl	9
10	57	Female	None	Infection	7.5	None	7

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Conclusion

Composite polypropylene mesh removal is indicated in case of prosthesis infection or, rarely, in case of chest wall recurrence at the edges of the prosthesis.

Reconstruction after prosthesis removal may require soft mesh but very often no new prosthesis is needed due to fibrosis stabilizing chest wall.

This is a safe and effective procedure, with an almost uneventful post operative course.

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