OBJECTIVES
Severe blast injuries represent a surgical challenge for the concomitant poorly vascularized soft tissues and multiple hand fractures. Controversies of treatment exist regarding the need of multiple surgical attempts to save the severely amputated limb.

METHODS
Two cases of severe blast and avulsion injuries are presented. Clinical examination in both cases showed severe mangled hands with devascularization of the thumb, index, middle fingers. Multiple metacarpals, phalangeal fractures were present. Distal soft tissues were devascularized. Surgical priorities in order of importance consisted of:
1) debridement of devitalized tissues,
2) thumb reimplantation,
3) open carpal tunnel release and forearm fasciotomies,
4) reconstruction of the soft tissues with fillet flaps, groin flap and integra placement,
5) open reduction and internal fixation of multiple fractures.

RESULTS
Both patients achieved limb salvage. Postoperative, one patient required further debridement and more stable soft tissue coverage with groin flap. Hand therapy was initiated and good progresses were achieved. Sensation of the right thumb was present in both cases and assessed with light touch and two point discrimination test. Pinch and grasping was achieved in one case.

CONCLUSIONS
Severe blast injuries represent a challenge and should be address with the following algorithm: debridement, reimplantation and revascularization, stable soft tissue coverage and bone fixation. Limitations of the study are the retrospective nature and the limited number of patients enrolled.