

GRADING SYSTEM FOR GUNSHOT INJURIES TO FEMORAL DIAPHYSIS

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Bones and Spine

BACKGROUND

- Not all GSW to femur are equal.
- Muzzle speed is usually not helpful.
- No accepted classification for GSW.

STUDY DESIGN

- 120 patients over 3 years in one institution.
- Prospective study
- 3 treatments groups
 - Group I: low energy
 - Group II: Intermediate energy
 - Group III: high energy
- Minimal f/u: 6 month

GRADING CRITERIA

	<u>I</u>	<u>II</u>	<u>III</u>
Size of wound	<2cm	2 to 5 cm	>5 cm
Xray: bone destruction	< 1/3 diameter	<2/3 diameter	>2/3 diameter
xray: bullet fragments	<=3	<=6	>=7

TREATMENT OPTIONS

- **Group I**: Immediate IMR without wound exploration.
- **Group II**: wound exploration, Immediate IMR if no necrotic muscle; I&D then delayed IMR if evidence of necrotic muscle.
- **Group III**: Multiple I&D, followed by IMR

RESULTS

<u>group</u>	<u># of pts</u>	<u>Infx rate</u>
I	79	0%
IIa (no necrosis)	2	0%
IIb (necrosis)	5	43%
III	14	50%

CONCLUSION

- PE and Xray findings are important in treatment decision making.
- Group III and IIB have significant higher chance of infection.
- Value of delayed IMR after multiple I&D need to be determined with further studies.