

Randomised controlled trial on risk adapted damage control orthopaedic surgery of femur shaft fractures in multiple trauma patients

Submission date 05/01/2007	Recruitment status No longer recruiting	☒ Prospectively registered
		☒ Protocol
Registration date 09/02/2007	Overall study status Completed	☐ Statistical analysis plan
		☒ Results
Last Edited 13/10/2016	Condition category Injury, Occupational Diseases, Poisoning	☐ Individual participant data

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
2.0 - 07/11/2006

Study information

Scientific Title

Randomised controlled trial on risk adapted damage control orthopaedic surgery of femur shaft fractures in multiple trauma patients

Study objectives

Primary reamed nailing of femoral shaft fracture versus temporary fixation with fixateur externe and secondary reamed intramedullary nailing (not earlier than 48 hours after trauma) are different in maximum Sepsis-related Organ Failure (SOFA) score within four weeks after trauma.

Ethics approval required

Old ethics approval format

Ethics approval(s)

University of Cologne, 13/11/2006, ref: 02-109

Primary study design

Interventional

Study design

Randomised controlled trial without blinding

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Multiple trauma (including femoral shaft fracture)

Interventions

Experimental intervention:

Temporary fixation with fixateur externe and secondary reamed intramedullary nailing not earlier than 48 hours after trauma.

Control intervention:

Primary reamed nailing of femoral shaft fracture.

Intervention Type

Procedure/Surgery

Primary outcome(s)

Maximum SOFA Score within 4 weeks after trauma

Key secondary outcome(s)

1. Hospital mortality
2. Cumulative organ failure = sum of SOFA score points for the first 28 days
3. Acute Respiratory Distress Syndrome (ARDS) incidence
4. Systemic Inflammatory Response Syndrome (SIRS) and sepsis incidence during Intensive Care Unit (ICU) stay
5. Quantity and duration of surgical interventions, anaesthetics and costs of surgery (material, time)
6. Length of ICU stay, number of ventilator free days
7. Therapeutic Intervention Scoring System (TISS) 28 during ICU (costs)
8. Rate of phlegmona of the medullary cavity

9. Patient rate in which conversion to internal fixation was not possible
10. Rate of pseudarthrosis
11. Functional outcome at discharge, six and 12 months after trauma
12. Quality of life at discharge, six and 12 months after trauma (determined by Polytrauma Outcome [POLO] chart)
13. Glasgow Outcome Scale (GOS) at discharge, six and 12 months after trauma
14. Length of hospital stay
15. Length of inability to work

Completion date

01/04/2009

Eligibility

Key inclusion criteria

1. Multiple trauma (injury of at least two body regions)
2. Injury Severity Score (ISS) more than 16
3. Femoral shaft fracture which can be treated in principle by nail or fixateur externe
4. Beginning of surgical treatment within 24 hours after trauma
5. Patient aged 18 years and older
6. Calculated probability of death between 20% and 60%
7. All factors known which are needed for the calculation of probability of death (age, ISS, Glasgow Coma Score [GCS], base excess, quick)

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Sex

All

Key exclusion criteria

1. III° open fractures
2. Endangerment of the patient by one of the both strategies
3. Refusal of one of both strategies by either the investigator or the patient
4. Start of internal or external fracture fixation before randomisation
5. Participation in concurrent interventional trials
6. Pregnancy

Date of first enrolment

01/04/2007

Date of final enrolment

01/04/2009

Locations

Countries of recruitment

Germany

Study participating centre

University of Witten/Herdecke

Cologne

Germany

51109

Sponsor information

Organisation

Private University of Witten/Herdecke gGmbH (Germany)

ROR

<https://ror.org/00yq55g44>

Funder(s)

Funder type

Government

Funder Name

Deutsche Forschungsgemeinschaft (Germany) (ref: DFG RI 929/3-1)

Alternative Name(s)

German Research Association, German Research Foundation, Deutsche Forschungsgemeinschaft (DFG), DFG

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

Germany

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	25/01/2016		Yes	No
Protocol article	protocol	19/08/2009		Yes	No