**Supplement A1**

**Management of blunt hepatic and splenic trauma in Austria: multicentre questionnaire study**

**1) Do you treat patients with blunt abdominal trauma at your institution?**

Yes

No

**2) Which kind of medical centre is your institution conforming?**

Acute Care General Hospitals (level I)

Specialty Acute Care Hospitals (level II)

Teaching/University Hospitals (level III)

**3) Which department is responsible for the treatment of blunt abdominal trauma with hepatic or splenic rupture at your institution?**

Department of trauma surgery

Department of general surgery

It depends on grade of concomitant injuries

Case by case decision

Others

**4) How many patients with blunt hepatic or splenic injuries were treated at your institution in 2016?**

0-5

5-20

20-50

>50

Unknown data

**5) How many were treated conservatively?**

<20 %

20 % - 50 %

50 % - 70 %

> 70 %

Unknown data

**6) How do you define non-operative management (NOM) of blunt hepatic and splenic injuries?**

No invasive treatment

Interventions like angiography and ERCP are also considered conservative treatments

Each invasive treatment, leading to organ preservation (for example splenorrhaphy)

**7) Do you apply a classification of liver/spleen injuries?**

No

Yes, which one?

**8) Are you considering a classification of liver/spleen injuries as helpful in clinical setting?**

Yes

No

Others

**9) Which environment do you think is appropriate for the treatment of blunt hepatic/splenic injuries?**

Always in maximum care hospitals

Maximum care hospitals only for complex cases

Each surgeon has to handle the management procedures

This is primary a question of infrastructures (angiography, ERCP)

Others

**10) Did you observed a trend in management of splenic injuries at your institution?**

Yes, trend moves towards conservative management

Yes, trend moves towards operative management (splenectomy)

Yes, we increasingly use interventional radiology

No, we still apply operative treatment

No, we still apply conservative treatment

**11) Which criteria need to be fulfilled for conservative treatment of blunt hepatic/splenic injuries? (More answers allowed)**

Haemodynamic stability

No contrast extravasation on computer tomography

No relevant haemoperitoneum

AAST classification < grade III liver/spleen

No concomitant injuries of other organs

Needing of < 3 transfusions before hospital admission

Age > 55

No relevant anticoaugulation

(Experienced) medical specialist in service

Number of required transfusions before hospital admission

Others

**12) Are you applying a standard algorithm in management of hepatic/splenic injuries?**

Yes, a standard algorithm is adhered to

No, each patient gets individual treatment

A standardised procedure is in preparation

Others

**13) When do you allow post-traumatic mobilisation in blunt hepatic/splenic injuries?**

Mobilisation on first post-traumatic day

Mobilisation on second post-traumatic day

Mobilisation on third post-traumatic day

Mobilisation always after third post-traumatic day

This is an individual decision

Partial bed restrain (for example toilet) is always immediately allowed

Others

**14) Do you perform routine follow-up imaging after blunt hepatic/splenic trauma at your institution?**

Yes, follow-up imaging with computer tomography is performed after 3-6 months is performed Yes, monthly follow-up imaging with ultrasound is performed Yes, at first monthly follow-up imaging with ultrasound and finally computer tomography after 3-6 months is performed No routine follow-up imaging Others

**15) Which tis the optimal timing for initiation of deep vein thrombosis prophylaxis at your institution?**

Prophylaxis of thromboembolic events with low-dose heparin is started immediately after trauma

Prophylaxis of thromboembolic events with low-dose heparin is started < 48 hours after trauma

Prophylaxis of thromboembolic events with low-dose heparin is started > 48 hours after trauma

Because of higher risk of bleeding in trauma patients, prophylaxis of thromboembolic events is not performed

This is an individual decision

Others

**16) Do you perform immunisation after conservatively treated blunt splenic injuries at your institution?**

No, only after splenectomy

Yes, but only in case of splenic embolization

Yes, always in conservative management of blunt splenic injuries

Others

**17) Do you think a standardised algorithm for NOM of blunt hepatic/splenic injuries would be helpful?**

Yes, because actually few clear recommendations exist and each centre takes individual decisions

No, because conservative treatment must always be individualised

Others

**18) Do you organise routine audits of outcomes at your institutions?**

Yes

Not routinely, only individual cases

No

**19) How high would you estimate the risk of secondary spleen rupture?**

0 - 10 %

10 - 20 %

20 - 30 %

> 40 %

**20) Does the potential risk of secondary spleen rupture influence the time of hospital discharge at your institution?**

Yes, maybe

Yes, definitely

No, maybe

No, definitely not

**21) How do you consider the potential consequences of splenectomy?**

Insignificant, the indication should be legitimated

In old patients the indication should be evaluated carefully

The spleen should be always preserved with all resources

Others

**22) Which criteria are relevant for demission from intermediate/intensive care? (More answers allowed)**

Complete painless

Rising haemoglobin/haematocrit levels

Defined haemoglobin/haematocrit levels

Regressive haemoperitoneum

Patient age

Others

**23) We recommend return to activity after:**

2 weeks

4 weeks

6 weeks

8 weeks

No recommendation

Others

**24)** **Do you think the management of blunt hepatic/splenic injuries in Austria is actually standardised?**

Yes

No, standardised procedures are required

**Results**