STRUCTURED TRAUMA TEAM APPROACH TO TRAUMA CARE

INTRODUCTION

A Structured Trauma Team Approach for larger trauma teams should promote good clinical decision making, promote good communication within the team and promote the efficient delivery of patient care by allowing rapid parallel assessment and resuscitation. A formalised structured approach is vital in larger centres because there are usually multiple team members who may be unfamiliar with each other. Without a formal structure there may be a lack of decision making, communication errors and a failure to effectively utilise the extra staff available. Many of the concepts used to promote effective function in larger teams can be adapted for use in smaller centres with less staff.

There are many potential ways to effectively deliver good trauma care. The Structured Approach taught in this course is based on a combination of clinical experience, ATLS principles and teamwork theory. Alternative approaches are discussed and the pros and cons of different approaches explored. Ultimately, the Structured Approach is one way of delivering care that should be adapted to local conditions. The key features of this approach are as follows:

- Write up IMIST pre notification on whiteboard
- Allocate team roles and outline patient specific plan prior to patient arrival
- Clearly identify team leaders and members using different coloured gowns/name badges
- Ambulance Handover on trolley unless patient moribund.
- Rapid Primary Survey assessment performed by nominated doctor talking out loud with parallel resuscitation by Team Members.
- Team Leader confirms Primary Survey findings in structured ABCDE fashion with the team at the end of the Primary Survey, summarises any initial resuscitation, proposes further management plan and asks for suggestions from Team Members
- Trauma Team Leader performs regular structured ABCDE Team Updates during the resuscitation to allow team decision making, cross check and feedback.

The aim of the Trauma Team should be that within about 15-20 minutes of the patient's arrival the following should have been achieved by employing good teamwork and communication:

- Effective MIST Handover
- Rapid ABCDE Primary Survey
- Parallel ABCDE Resuscitation
- Identification and initial treatment of immediate life threatening injuries
- An ABCDE Team Summary with crosscheck and feedback
- An ABCDE Team Management Plan should have been established
- The need for patient disposition / transfer should have been considered

Note that with effective team communication all members of the Trauma Team (or conceptually somebody sitting in the corner of the room listening) should be aware of the major ABCDE findings and the management plan. The following sections provide more detail about each of these key features and the rationale for using this approach.
WRITE UP IMIST ON WHITEBOARD

- Allows all members of team to see pre hospital history during preparation phase.
- Allows late arrivals to see pre hospital history before joining team.
- Allows team to refer back to initial information during Ambulance Handover or later in resuscitation.

ALLOCATE TEAM ROLES

- Clear roles need to be identified.
- Roles recommended in this course for larger hospitals with larger teams are:

  4 Doctors 3 Nurses

  Doctor 1 - Medical Team Leader - Coordinate and make decisions
  Doctor 2 - Primary Survey - Performs primary survey & repeat assessments & assists with procedures
  Doctor 3 - Airway - Manage airway
  Doctor 4 - Circulation/Procedures - Manage circulation/procedures

  Nurse 1 - Nursing Team Leader - Coordinate and scribe
  Nurse 2 - Airway - Manage airway
  Nurse 3 - Circulation/Procedures - Manage circulation/procedures

  nb If only 3 doctors consider combining MTL and Primary Survey roles with MTL doing Primary Survey then standing back.

- In smaller hospitals or with smaller teams roles may need to be combined for example.

  2 Doctors 2 Nurses

  Doctor 1 - Medical Team Leader - Primary survey and airway
  Doctor 2 - Circulation and procedures

  Nurse 1 - Nursing Team Leader - Airway and scribe
  Nurse 2 - Circulation and procedures

  nb In this situation Nurse 1 could maintain airway while Doctor 1 completes Primary Survey.

- Note that these roles are only a guide and each hospital should organize its team structure to suit its local conditions and requirements.
PATIENT SPECIFIC PLAN

- Use pre hospital information to brief team on initial resuscitation priorities
- Standard ABCDE approach but focus on team priorities
- Having a plan and priorities helps focus team
- Similar concept to performance visualisation in sporting teams

CLARENTLY IDENTIFY TEAM LEADERS AND MEMBERS

- It is useful for all staff to be able to easily identify the Team Leaders
- It also helps communication if peoples names are clear
- Use different coloured gowns for Team Leaders and Team Members
- Write you name and role on your gown or use a badge

AMBULANCE HANDOVER

- Unless the patient is dying do the handover rapidly on the Ambulance trolley
- The patient has probably been pre hospital for 30-60 minutes minimum and another 1-2 minutes getting the whole team to listen to the handover is time well spent.
- After the handover the team can focus on their individual tasks while the Team Leader coordinates and keeps an eye on the big picture.
- The advantage of the whole team hearing the handover is that the individual team members are aware of the big picture from the start and may also pick up information that the Team Leader misses that they can feedback during resuscitation.
- Handover on the bed means the team members are focusing on their tasks and miss the handover while the Team Leader is focusing on the handover and may miss crucial initial clinical information and the big picture overview may be lost.

PRIMARY SURVEY TALKING OUT LOUD

- Ideally performed by a single doctor who does a rapid ABCDE assessment while talking out loud for the whole team to hear
- The whole team gets to hear findings and anticipate needs
- Airway and Circulation/Procedures doctors/nurses can concentrate on performing parallel resuscitation
- A clear initial assessment can be obtained rapidly without gaps
- The staggered approach of Airway Doctor doing airway and breathing may sometimes result in inadequate chest assessment. Both the Airway and Circulation/Procedures Doctor may get caught up performing procedures. It is often unclear who performs Disability/Exposure. There is therefore sometimes a delay in getting a clear ABCDE overview. A single doctor doing only assessment should be able to get a clear ABCDE overview in 2-3 minutes.
- One advantage of having a Primary Survey Doctor perform the initial ABCDE assessment is that it allows the other team members to perform resuscitation in parallel. Thus a rapid ABCDE overview can be obtained at the same time as interventions such as initial airway maintenance and vascular access are performed. This takes full advantage of a larger team.
TEAM LEADER CONFIRMS PRIMARY SURVEY AND RESUSCITATION

- At the end of the initial Primary Survey the Medical Team Leader should summarise the findings in an ABCDE fashion including any resuscitation performed to date and ask for confirmation (Is that right?)
- This allows Team Members to confirm the Team Leader has the correct information and feedback any additional observations or feedback.
- This takes full advantage of all experienced Team Members and provides a formalised time for them to provide feedback.
- The Team Leader should then propose a management plan and ask for feedback (Any suggestions?) The Team Leader should make the final decision on management.
- This allows the whole team to be involved in decision making and be informed of the management plan.

REGULAR TEAM UPDATES

- The Team Leader should regularly update the Team in an ABCDE fashion to receive crosscheck and feedback
- With each update the Team Leader should outline the ongoing management plan and ask for suggestions and feedback from Team Members
- Updates should occur every 10-15 minutes or following significant interventions.
- Good times to do Team Updates include prior to transferring to Medical Imaging, ICU, OT or when ICU/Surgical/Orthopaedic Registrars or Consultants arrive
- Following a Team Update is also a good time to handover Team Leadership if required.

SUMMARY

A Structured Trauma Team Approach should promote good clinical decision making, promote good communication within the team and promote the efficient delivery of patient care by allowing rapid parallel assessment and resuscitation. During the course you will be given the opportunity to practice this approach during trauma clinical scenarios. The ATTT Structured Approach is one way of promoting effective teamwork and ATTT recognises that different institutions will use slightly different approaches to deliver good patient care.

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