BEST PRACTICE MODEL FOR TELECONSULTATION IN URGENT TRAUMA

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http://www.telemed.org.ua

Background
The increasing of quality of treatment for traumatized and polytraumatized patients is one of the most important problems in modern medicine. Due to telemedicine not only the doctor in charge or the staff of the local hospital are concerned with treatment of the patient, but the “collective intellect” of all the physicians of our planet.

Main goals
- equipment and communication
- technologies

Decisions
Telemedical work station (TWS)
Main TWS for urgent trauma:
- PC, SVGA monitor, multimedia equipment, CDROM
- high quality scanner
- digital photocamera with short video clips
- printer
- modem
- sets of any equipment for diagnostic and treatment
- auxiliary equipment
- mobile GSM phone with camera and MMS technology

Secondary TWS for urgent trauma:
1) Mobile 1:
- mobile GSM phone with camera and MMS technology
2) Mobile 2:
- PDA
- digital camera for PDA
- wi-fi card or mobile phone for GPRS

Communications’ ways:
- direct Internet line (for big medical establishments)
- dial-up Internet line
- GPRS or Wi-Fi Internet line
- mobile phone+SMS+MMS line

Principal scheme for using of different kinds of TWSs is presented on fig.

Priority of different medical datas and technologies for teleconsultation in urgent trauma
Skeletal trauma:
- data - digital x-rays (jpeg), locus morbi pictures (jpeg), CT, MRI (jpeg/dicom), short case history (important informations, tests etc only);
- technology – e-mail+ICQ/MSN, SMS+MMS, web-application+urgent call
Maxillo-Facial trauma:
- data - digital x-rays (jpeg), locus morbi pictures (jpeg), short case history (important informations, tests etc only), CT (jpeg/dicom).
- technology – SMS+MMS, e-mail+ICQ/MSN, web-application+urgent call

Polytrauma:
- data - digital x-rays (jpeg), locus morbi pictures (jpeg), CT (jpeg/dicom), MRI (jpeg/dicom), short case history (important informations, tests etc only)
- technology – videoconference, e-mail+ICQ/MSN, web-application+urgent call

Brain trauma:
- data - CT (dicom), MRI (dicom), short case history (important informations, tests etc only), digital x-rays, locus morbi pictures (jpeg)
- technology - e-mail+ICQ/MSN, videoconference, web-application+urgent call

Abdomen/Thorax trauma:
- data - CT (dicom), short case history (important informations, tests etc only), MRI (jpeg/dicom), digital x-rays (jpeg)
- technology - e-mail+ICQ/MSN, videoconference, web-application+urgent call

Non-emergency cases for teleconsultation (confirmation of treatment, determination of complication prevention methods, the patient doubting diagnosis, treatment and its results, complaint analysis, search for alternative solutions for clinical tasks) – web or special application, mailing lists, e-mail, second-opinion.

**Fig. Scheme for using of different kinds of TWSs**

**NB! During usage of open technologies (mailing lists, forums, ICQ, MSN etc) it is necessary to pay special attention for confidentiality and anonymity of the medical information (patients consent, anonymisation, encryption, digital signature etc)**

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