Intravenous therapy and medication

ELCT Health Department
Quality Assurance 2007
Intravenous therapy and medication

- the procedure is absolutely sterile, everything should be handled remaining sterility as strictly as possible
- use as small cannula as possible e.g. G 20 is appropriate for adults
- clean the site first by 60 - 70 % alcohol
- the iv. infusion after preparing it ( bag or bottle ) should not hang more than 24 hrs
- the sterile dressing must be changed daily or whenever unclean and the site should be cleaned by 2 % savlon or 60-70 % alcohol
- resiting the peripheric cannula is recommended after 48 – 72 hours or when signs of infection
- fix the iv. cannula well at the first time so you don’t have to stick again
- if iv. cannula is blocked you can only aspirate it, but don’t never flush it !!!!!!!!!!!!!!!!
- insert to less used hand, try to avoid the veins in the legs because of high trombosis risk
- removal of intravenous device or cannula is also an aseptic procedure
- main reasons to start an iv.line:
  » to give nutrients for the patient, when not possible or enough to use enteral way and NGT
  » maintain the fluid balance in the body
  » to maintain electrolyte balance
  » emergencies: shock, bleeding, severe burns, trauma cases, vomiting, diarrhea, cardiac problems
  » administration of medicines
  » administration of anaesthetic agents
advantages to use **intravenous route:**

» an immediate therapeutic effect is achieved
» pain and irritation caused by some substances when given intramuscularly or subcutaneously are avoided
» some drugs can’t be absorbed by any other route
» for the patients who can’t tolerate fluids or drugs by gastrointestinal route
» iv.route offers a better control over the rate of administration medicines

intravenous drugs must be injected slowly such as pethidine, diatzeepam and antibiotics

» **bolus** = few drugs can be given straight as atropine
» **stosis** = give carefully over 15 – 20 minutes such as aminophylline and antibiotics diluted in 10 –20 ml
» **intermittent infusion:** flagyl, antibiotics preferably always in this way and diluted to 100 ml normal saline or ringer lactate
» **continuous infusion:** quinine
• fluid balance chart should be used for all patients receiving intravenous fluids, careful documentation of input and output with dates and exact times

• don’t disconnect iv.set never from the iv.bottle only to change the bottle

• use three-way tap if you have to give drug infusion in addition of maintenance infusion

• rapid, uncontrolled administration of drugs will result in vein irritation, toxic concentration, side effects, anaphylactic shock → death

• iv. line is a dangerous way to give medicines - inability to recall the drug and reverse the action of it
extra care required with infants and young children, the elderly, cardiovascular cases, kidney problems, lung disorders, sepsis patients, different kinds of shocks, postoperative and post-trauma cases, patients receiving multiple medications whose status may change rapidly, critically ill patients.

All medications given intravenously should be diluted to NaCl 0,9 %, there are only some exceptions e.g. quinine because the medicine causes hypoglycemia.

Record vital signs and other observations include e.g. weight and oedema.
• after blood transfusion and administering antibiotics it is advised to change the iv.set
• infection is the commonest problem of intravenous cannula, may be localized as trombophlebitis or may progress to septicaemia
• don’t put anything to the patient bed
• only one addition should be made to each bag or bottle and definitely only one medicine in one syringe
• pediatric iv. set
• make exact calculations and ask advice
• infusion controllers
• electronic pumps
Hospitals have habit to keep iv.cannula many days like this which practice must be stopped!! It is a source of infection. Cannula is blocked even in the first day in first hour!!