Intravenous Therapy
Principles of Care

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Objectives

- State indications for intravenous therapy
- List the advantages and disadvantages of intravenous therapy
- Identify the principles of safe intravenous therapy administration
- List the complications of intravenous therapy
- Identify different cannula and infusion sets
PHYSIOLOGICAL LOCATION OF IV THERAPY
Care of Patient with IVI

“The aim of intravenous management is safe, effective delivery of treatment without discomfort or tissue damage and without compromising venous access, especially if long term therapy is proposed”

The Royal Marsden NHS Trust
Manual of Clinical Nursing Procedures
Fourth Addition
Indications

- Fluid and electrolyte replacement
- Administration of medicines
- Administration of blood/blood products
- Administration of Total Parenteral Nutrition
- Haemodynamic monitoring
- Blood sampling
Advantages of IVI

- Immediate / Therapeutic effect
- Control over the rate of administration / dilute infusions / prolonged action
- Patient cannot tolerate drugs / fluids orally
- Some drugs cannot be absorbed by any other route
- Pain and irritation is avoided compared to some substances when given SC/IM
Disadvantages/Complications of IVI

- Cannot recall drug/Reverse action of drug/may lead to toxicity
- Phlebitis: Mechanical/chemical irritation
- Thrombophlebitis
- Infiltration and Extravasation
- Microbial contamination/Infection
- Circulatory overload - Insufficient control of administration may lead to speed shock / Decrease blood pressure, tachycardia, cyanosis
- Anaphylaxis/ Allergic reactions - Itching, rash, shortness of breath
Disadvantages/Complications of IVI contd

- Drug incompatibilities
- Needle phobia
- Administration time
- Body image
- Technical problems
  - Air in line
  - Blood in the giving set
  - Empty container
INFECTION

- adhering to aseptic technique is vital in the prevention of intravenous related infections. Asepsis should be maintained at insertion, during clinical use and at removal of the device.
EXTRA-VASATION INJURY

- Extra-vasation injury on adult patients' wrist
EXTRA-VASATION

- Phenytoin extravasation injury
EXTRA-VASATION

- Calcium gluconate extravasation detailed on an x-ray
EXTRA-VASATION

- the inadvertent administration of a vesicant substance into the tissues can have disastrous outcome
Principles of administration

- Pre-Plan
- Explanation of procedure to the patient
- Gain patients consent
- Understand the associate risks
- Use aseptic non touch technique ANTT
- Know how to use the products/infusion sets
- Examine infusions while they are running
- Avoid unnecessary interference with the lines
Patient Comfort/Safety

- May be anxious/previous experience
- Require explanations and reassurance
- Explain that they should not alter the infusion rate or fiddle
- Pain or discomfort are not acceptable, these indicate complications
- Ideally through an infusion pump (training required) this regulates the infusion rate
Principles of Administration

Assessment of venous access
Prevention of Infection
  • Site Preparation
  • Contamination by Practitioner

ANTT
Trust Guidelines – Insertion, Management and Removal of Intravenous Cannulae
Safe Practice

- Know when to seek extra help
- Safe disposal of equipment
- Clinical incident Reporting
- Be familiar with Trust Drug Policy
Documentation

- NMC requirement
- Should be a comprehensive record including type of access device, location and condition of entry site - Visual Infusion Phlebitis Score
- Prescription should be clear, detailing route medication dose and frequency
- Should be checked by two nurses
- IVI prescription sheet
Requirements of a Cannula Dressing

- Sterility
- Ease of Application
- Ease of replacement
- Ease of inspection
- Ease of removal
Conclusion

- Integral part of nurses professional practice
- Responsibility to deliver evidence – based care
- Patient centred ensuring patient safety and well being
Further Reading

Standards for infusion therapy
RCN (October 2003)

Workman B. Peripheral intravenous therapy