Fast Tip 10.2 Tourniquets

Wrapping a constricting band (tourniquet) around the arm helps the vein become more visible. The tourniquet should never be placed on the patient for more than 2 minutes. If it takes longer to find a suitable site, release the tourniquet and begin elsewhere. Check your organization's policy, and call for assistance if you cannot insert the IV line after two attempts.

Health-care professionals may be asked to flush an indwelling IV device that is not attached to a running IV line. Follow the organization's policy by flushing with heparin or NSS as ordered and at the frequency specified. Also make sure that your agency's policy allows you to do this procedure. Clean the port with an antiseptic wipe, and enter the port with the needleless adapter and syringe drawn up with the ordered flush solution following your agency's procedure manual. Even if you are not allowed to flush a line, you should assess the patient who has an indwelling port for signs and symptoms of infiltration, infection, and other problems.

As a health-care professional, you must observe the IV site on a regular basis. If you see redness and swelling, feel unusual warmth at the site, hear the patient complain of tenderness or pain, or note that the site feels like a firm rope or that the cannula is no longer in a vein, notify your supervisor immediately. The supervisor may ask you to stop the IV infusion quickly, although do not remove the IV line without permission.

Complications of IV therapy include bleeding, infection, phlebitis, infiltration, catheter dislodgment, occlusion, vein irritation, severed catheter, hematoma, venous spasm, thrombosis, thrombophlebitis, circulatory overload, nerve, tendon, or ligament damage, systemic infection, air embolism, allergic reaction, incompatibility of medications, and irreversible medication error. The most common complications include the following.

- **Infiltration** occurs when the IV catheter becomes displaced and allows IV fluids and medications to leak into the tissue surrounding the vein. This complication can cause a varying degree of injury, from discomfort to permanent damage to the tissue, depending on how quickly the problem is discovered and how caustic the medication is to the tissue.
- **Thrombus** (blood clot) or **phlebitis** (vein inflammation) can result from extremes in solution pH, needle or catheter trauma, particulate material, irritating drugs, or selection of a vein too small for the volume of solution infused. Check the vein for signs of inflammation (e.g., redness, swelling, and warmth to the touch) or pain.
- Air **emboli** (bubbles released into the bloodstream) can occur if air enters the vein. Small amounts of air in veins are not usually harmful, but rapidly injecting air into the vein can be fatal. Be careful to purge all air from the IV tubing before securing the line in the patient. Assess the patient's respiratory status, and report and document any changes.
- Particulate material (small particles) can cause vein irritation. Small pieces of glass can chip away from the vial or bottle. For this reason, many pieces of IV tubing contain a final filter in the line. Swelling and redness at the site can signify that particulate matter has infiltrated the vein.

SUMMARY

- Parenteral medications include all medications that are not ingested or introduced into the gastrointestinal system.
- Parenteral administration includes topical, ophthalmic, otic, nasal, inhalation, and injection.
- Parenteral medications come in different forms and compositions, some ready to administer and others that need to be prepared before use.
- Topical medications are applied directly to the skin as a patch, ointment, cream, lotion, plaster, or gel.