Circulatory – Measuring Peripheral Edema

SECTION: 1.09

Strength of Evidence Level: 1

PURPOSE:
To provide a consistent method for measuring and documenting peripheral edema.

CONSIDERATIONS:
1. Two methods of measuring peripheral edema are found in the literature: Digital pressure for soft, pitting edema; measurement of the extremity for edema that is nonpitting.
2. Digital pressure uses the depth of depression that is obtained by applying thumb or forefinger pressure for at least 5 seconds against a bony prominence.
3. Measurement involves measuring the circumference of the extremity at specific sites. The sites are inches from bony landmarks. The site for measuring the instep is 5 inches from the end of big toe; for the ankle, it is 4 inches from heel; for calf, it is 11 inches from heel.

EQUIPMENT:
Measuring tape in centimeters or inches

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Choose method of measuring peripheral edema.
   a. Digital Pressure Method
      (1) Press thumb or index finger behind each anklebone, over top mid-portion of each foot, and over shins for at least 5 seconds.
      (2) If a pit of depression develops, compare to the following chart and record:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Physical Characteristics</th>
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</thead>
<tbody>
<tr>
<td>1+</td>
<td>Slight pitting, no visible change in the shape of the extremity; depth of indentation 0-1/4&quot; (&lt;6 mm); disappears rapidly</td>
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<tr>
<td>2+</td>
<td>No marked change in the shape of the extremity; depth of indentation 1/4 -1/2&quot; (6-12 mm); disappears in 10 to 15 seconds</td>
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<tr>
<td>3+</td>
<td>Noticeably deep pitting, swollen extremity; depth of pitting 1/2-1&quot; (1-2.5 cm); duration 1 to 2 minutes</td>
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<tr>
<td>4+</td>
<td>Very swollen, distorted extremity; depth of pitting &gt; 1&quot; (&gt;2.5 cm); duration 2 to 5 minutes</td>
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</table>

b. Measurement Method
   (1) Nurse will determine which site to be used for measuring. The measurement points should be marked on the skin of both extremities at the time of first measurement.
   (2) Identify the appropriate landmark and measure the appropriate distance from the landmark. Place the tape around the extremity at that site and measure.
   (3) Repeat the process on the other extremity.
   (4) Abbreviations to use in documentation:
      RI, LI - right or left instep
      RA, LA - right or left ankle
      RC, LC - right or left calf
   (5) If measuring at a different distance from the bony landmarks, document the distance used.

AFTER CARE:
1. Document in patient's record:
   a. Method of measurement used.
   b. Results of measurement for sites measured.
   c. Patient education provided with patient response.
   d. Communicate with physician, if indicated.

REFERENCES: