ANALYSIS OF PITTING SCARS IN PROGRESSIVE SYSTEMIC SCLEROTIC PATIENTS

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Progressive systemic sclerosis (PSS) is one of collagen diseases which involve the skin and may also involve such internal organs as the heart, lungs, esophagus, kidneys and so forth(1). The presence of pitting scars in PSS patients is known to be one of the most important specific clinical signs. However, neither distribution nor prevalence is known, so that we observed pitting scars in PSS, SLE and dermatomyositis (DM) patients during four seasons( spring, summer, fall and winter) in one year. The results were very interesting.

SUBJECTS AND METHODS

We examined eighty-seven cases of PSS (M:F=8:79, age; 48.9+11.0 y-old), 14 cases of SLE (M:F=1:13, age; 41.3+17.1 y-old) and 6 cases of DM (M:F=2:4, age; 56.2+19.8 y-old) to analyze pitting scars during four seasons( spring, summer, fall and winter) in one year(June, 1988-May, 1989).

Pitting scars were defined as pin-hole sized concave structures with hyperkeratosis on the finger of the hand. Their distribution and shape were sketched on paper, as shown in Fig.1. As many sketches as possible were drawn in every season.

Pitting scars on three female patients(40, 48 and 58 year-old) with PSS were biopsied for histopathologic examination, and also those of a 44-year-old male patient with DM.

RESULTS AND DISCUSSION

Pitting scars were recognized in 34 cases(39.1%) of PSS and 5 cases(83.3%) of DM, mainly on the fingertips, radial sides of digital & middle fingers and ulnar side of thumb(Fig.1). These distributions of the pitting scars of PSS and DM were quite similar to each other, but DM showed erythema or a reddish halo around the pitting scars. The frequency of pitting scars occurrence in severer cases of PSS was significantly greater than that in milder cases of PSS.

The patients with SLE had no pitting scars(Table1). However, tip-ulcers were seen in all three diseases.

Histopathologically, the pitting scars seen in PSS patient showed an increase and homogenous change in collagen fibers with crown-like hyperkeratotic plugging. Dilatation of small blood vessels was seen in the upper dermis of DM.

These pitting scars may be very useful as a guide in the diagnosis of collagen
Maeda M et al: Pitting scars in PSS

Figure 1. Distribution of pitting scars in PSS

Table 1. Differential characteristics of pitting scars in collagen diseases (PSS, SLE and DM).

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<thead>
<tr>
<th></th>
<th>PSS</th>
<th>DM</th>
<th>SLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitting scar</td>
<td>(+)</td>
<td>(+)</td>
<td>(−)</td>
</tr>
<tr>
<td>Prevalent</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Finger-portion</td>
<td>tip&gt;side</td>
<td>side&gt;tip</td>
<td></td>
</tr>
<tr>
<td>Erythema</td>
<td>(−)</td>
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diseases, especially in differentiating among PSS, SLE and DM. Moreover, their number may be a valuable guide in estimating the severity of PSS, because severer cases of PSS tend to have many pitting scars, and PSS with anti-Scl 70 antibody reported by Manoussakis et al.(2) possessed pitting scars.

REFERENCES