Menton-The Spleen

Andrew Lister
The Spleen+ Lymphoma

- Is it ‘enlarged’?
- Is it ‘involved’?
- How do you know?

DOES IT MATTER?
In homine difficilius emergunt: si tamen ex morbo universum glandularum genus turgeat, manifestiores redduntur, aucta ipsarum magnitudine, ut in defuncta puella observavi, in qua lien globulis conspicuis racematim dispersis totus scatebat.

In man it is with some difficulty that they arise: but if, as a result of disease, all the glands swell, they (the organs?) are rendered more obvious, with the increase of their own size. I have observed this in a dead girl whose body the spleen bubbled up, with its visible parts spread in clusters.

Malpighi, Marcello
1628-1694
ON SOME
MORBID APPEARANCES
OF
THE ABSORBENT GLANDS
AND
SPLEEN.
BY DR. HODGKIN.
PRESENTED
BY DR. R. LEE.

READ JANUARY 10TH AND 19TH, 1838.

The morbid alterations of structure which I am
about to describe are probably familiar to many.

Heading on cover page of Hodgkin’s classical
article (Medico-Chirurgical Transactions 17:68–114, 1832).
FOLLICULAR LYMPHOMA aka ‘BRILL-SYMMERS’ DISEASE

GIANT FOLLICULAR LYMPHADENOPATHY WITH OR WITHOUT SPLENOMEGALY, ITS TRANSFORMATION INTO POLYMORPHOUS CELL SARCOMA OF THE LYMPH FOLLICLES AND ITS ASSOCIATION WITH HODGKIN’S DISEASE, LYMPHATIC LEUKAEMIA AND AN APPARENTLY UNIQUE DISEASE OF THE LYMPH NODES AND SPLEEN - AN ENTITY BELIEVED HITHERTO UNDESCRIBED.

Symmers, 1938
THE SPLEEN

Fig. 515.—Bimanual palpation of the spleen.
The Spleen+ Lymphoma

Gall+ Mallory

n=618

SPLENOMEGALY

40% (14-56): LC 59%, HD 45%, FL 34%,.....

Gall+ Mallory AJPath, 1942
2. Specimens illustrative of the pathology of lymphadenoma and leucocythaemia.

By W. S. Greenfield, M.D.

I n bringing before the Society specimens illustrative of the pathology of lymphadenoma and leucocythaemia, it will be convenient to give some account of the cases from which most of the specimens are taken, then to describe the histological characters of the morbid changes in different organs, and afterwards to discuss some points in the general pathology and relations of these diseases. But in order to bring more completely into relief the morbid anatomy and histology of lymphadenoma, I have exhibited to the Society a number of specimens from other cases than those now recorded, some of which have already been shown to this and other societies, and have thus endeavoured to illustrate the several stages of the changes in various organs. Briefly to mention these, they are specimens from the liver in two cases, the spleen in three cases, the glands in three cases, and drawings of the naked-eye appearances of the liver and spleen in typical cases. The microscopic specimens were selected from sections of the glands in various parts of the body in seven cases, from the spleen in seven cases, the liver in two, and the skin in two, and also from growths in the omentum, the lungs, &c. Together with these, microscopic drawings illustrative of some of the most important changes are shown. I have been able only to bring one case of leucocythaemia, of which specimens and drawings from the liver, spleen, and kidney, and microscopic sections and drawings from the same organs, are shown.

Cover page of the 1878 paper by Greenfield, which, together with that of Langhans (1872), contained the first known descriptions of the characteristic binucleate or multinucleate giant cells of Hodgkin's disease, recognition of which is now usually erroneously credited to Sternberg (1898) and to Dorothy Reed (1902), and named after them.
The Spleen+ Lymphoma

Rosenberg et al

(n=1269)

Evaluation of hepatosplenomegaly in LSA

<table>
<thead>
<tr>
<th></th>
<th>Spleen</th>
<th>%</th>
<th>Liver</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM +ve</td>
<td>54</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>% of these enlarged</td>
<td>59</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>PM -ve Palpably enlarged</td>
<td>29</td>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>

*Rosenberg et al, Medicine, 1961*
A clinical syndrome
The Spleen+ Contiguous LN Involvement in HL

Table 7.6  Contiguity of Lymphatic Sites of Involvement in 340 Untreated Patients with Hodgkin's Disease

<table>
<thead>
<tr>
<th>Site</th>
<th>Total number instances involved</th>
<th>Sole site involved</th>
<th>Additional sites involved</th>
<th>Anatomic relationship to other sites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Right axillary nodes</td>
<td>78</td>
<td>5</td>
<td>73</td>
<td>8 65 89</td>
</tr>
<tr>
<td>2. Left axillary nodes</td>
<td>90</td>
<td>3</td>
<td>87</td>
<td>3 84 97</td>
</tr>
<tr>
<td>3. Right cervical-supraclav. nodes</td>
<td>199</td>
<td>12</td>
<td>187</td>
<td>1 186 99</td>
</tr>
<tr>
<td>4. Left cervical-supraclav. nodes</td>
<td>241</td>
<td>23</td>
<td>218</td>
<td>6 212 97</td>
</tr>
<tr>
<td>5. Mediastinal nodes</td>
<td>211</td>
<td>5</td>
<td>206</td>
<td>1 205 99.5</td>
</tr>
<tr>
<td>6. Hilar nodes</td>
<td>39</td>
<td>0</td>
<td>39</td>
<td>0 39 100</td>
</tr>
<tr>
<td>7. Para-aortic nodes</td>
<td>114</td>
<td>1</td>
<td>113</td>
<td>1 112 99</td>
</tr>
<tr>
<td>8. Iliac, inguinal, femoral nodes</td>
<td>54</td>
<td>5</td>
<td>49</td>
<td>1 48 98</td>
</tr>
<tr>
<td>9. Spleen</td>
<td>44</td>
<td>0</td>
<td>44</td>
<td>5 39 88</td>
</tr>
</tbody>
</table>

*Adapted, with the permission of Academic Press and the Harvey Society, from Kaplan (1970).
SPLEEN WEIGHT vs HISTOLOGY: HL

Stanford data, Glatstein et al, Cancer 1969, also Barts, RMH
GOODBYE LYMPHANGIOGRAM!
The Spleen: CT vs Histology:HL

<table>
<thead>
<tr>
<th></th>
<th>Para-aortic Nodes</th>
<th>Splenic Nodes</th>
<th>Spleen</th>
<th>Liver</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LG (%)</td>
<td>CT (%)</td>
<td>CT (%)</td>
<td>CT (%)</td>
</tr>
<tr>
<td>Overall</td>
<td>102/107 (85)</td>
<td>93/107 (87)</td>
<td>90/92  (98)</td>
<td>70/121 (58)</td>
</tr>
<tr>
<td>Positive report</td>
<td>17/19 (98)</td>
<td>13/20 (65)</td>
<td>0/1    (0)</td>
<td>17/34 (50)</td>
</tr>
<tr>
<td>Negative report</td>
<td>85/88 (97)</td>
<td>80/87 (92)</td>
<td>90/91  (99)</td>
<td>53/87 (63)</td>
</tr>
</tbody>
</table>

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Stanford data, Castellino et al Am J Roent. 1984

And in UK...

<table>
<thead>
<tr>
<th>LAP+</th>
<th>CT-</th>
<th>CT+</th>
<th>CT false+</th>
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</thead>
<tbody>
<tr>
<td>23</td>
<td>18</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Christie data, Crowther, Blackledge+Best, Clinics in Haematology 1979
STAGING LAPAROTOMY for NHL

![Diagram showing spleen findings and involvement]

**Figure 9.** Spleenic findings; 5 patients did not have splenectomy (see Results section).

*Stanford data, Goffinet et al, Cancer Treatment Reports 1977*
SPLEEN WEIGHT vs HISTOLOGY: NHL

Stanford data, Goffinet et al, Cancer 1973

Fig. 4. Spleenic weight correlated with involvement by lymphoma. Each black dot represents a palpable spleen, while concentric circles denote hepatic involvement by lymphoma.
SPLEEN WEIGHT vs HISTOLOGY: NHL

Fig. 2. Weights of negative and positive spleens. One negative spleen, removed at another hospital, is not tabulated due to inadequate information.

NCI data, Lotz et al, Cancer 1976
PET/CT

Medical Invention of the year in TIME magazine 2000
Dr David Townsend and Dr Nutt
Acknowledgments

Barts Cancer Institute

Greg Wolf Fund