

VAN DIE REDAKSIE : EDITORIAL

WITSELLE OF WITBLOEDSELLE?

Die term witbloedselle het vry algemeen in gebruik geraak in alle tale. Dit dui die kleurlose liggaampies aan wat alleen deur Ehrlich se kleurmetodes goed sigbaar geword het in die bloed. Die woord 'witbloedselle' dra egter 'n begrip-waarde wat die selle só eie aan die bloed maak, soos die term spierselle, beenselle, en breinselle sulke soort selle aan hul spesifieke organe verbind. Dit is 'n gevaarlike toedrag van sake omdat ons nou eenmaal geneig is om te dink in terme van analogie. 'n Voorvereiste om 'n sel as spiersel, beensel, of breinsel te bestempel, is die feit dat sulke selle funksioneel betrokke moet wees by die orgaan waaraan die naam ontleen is. Die funksie van die rooi-bloedsel is klaarblyklik in die bloed, en die benaming dus geheel korrek. Witselle, daarenteen, het geen aantoonbare funksie in die bloed nie; om die waarheid te sê, is die meeste witselle op enige gegewe oomblik nie in die bloedstroom teenwoordig nie.¹

Die onkunde aangaande witselfunksie herinner aan die toedrag van sake wat betref kardiiovaskulêre funksie voor die dae van William Harvey. Klinies is mens dikwels tevrede met 'n niksseggende beskrywing soos leukositose of leukopenie, om die aantal sirkulerende witselle aan te dui. As dit meer as normaal is, is ons tevrede om te sê die beenmurg produseer meer, en as dit minder as normaal is, skryf ons dit toe aan 'n beenmurgonderdrukking, met 'n paar vae hipoteses om paradoksale beenmurg- en perifere bloedtellings te versoen.

Die statiese begrip van die selle, as verbonde aan die bloed alleen, moet miskien gesien word as 'n nalatenskap van vroeë hematoloë. Die neutrofiel as 'n mikrofaage, met sy maklik aantoonbare beweeglikheid, het hom uitgesonder as 'n sel wat tog gemoeid is by infeksieprosesse. Die limfosiet, daarenteen, is deur Ehrlich² beskou as 'n terminale sel sonder toekoms. Hierdie idee is later deur Naegeli³ verder gevoer en word vandag nog aanvaar met byna godsdienstige geloof.⁴ Hoewel Ehrlich² sy konsep gegrond het op die onbeweeglikheid van die limfosiet, en die teenoorgestelde reeds herhaaldelik bewys is,⁵⁻⁷ sterf die statiese siening uiters langzaam.

Gelukkig het inkeer en insig ons onkunde aangaande witselfunksie blootgelê, en die afgelope dekade het groot belangstelling laat opflikker. Die tergende vrae wat uit hierdie werk ontstaan het, het minstens die omvang van die probleem omlyn. Dat dit omvattend is, word gestaaf

uit die volgende aanhalings uit oorsigartikels omtrent die spesifieke selsoort, wat in die afgelope dekade verskyn het:

'The human neutrophilic leucocyte... Knowledge of specific mechanisms and functions of these leucocytes is at a primitive level.'⁸ (1955)

'Eosinophilic granulocytes... remain a mystery.'⁹ (1953)

'The basophile... little is known about its functions and its functional relationship to the tissue mast cell.'¹⁰ (1959)

'... The developed monocyte exhibits biologic activities which suggest that it is probably of greater potentiality than is appreciated.'¹¹ (1955)

'(Lymphocytes) Their role in the body remain both an enigma and a challenge.'¹² (1958)

Die neutrofiel word vandag met byna algemene instemming aanvaar as 'n eindsel met geen toekoms voor hom nie,¹³ maar sonder neutrofiel-migrasie na 'n letsel sien mens ook nooit mononuklere selmigrasie nie.¹⁴ Die limfosiet, daarenteen, blyk volgens getuigenis 'n immunologies-kompetente sel te wees, en die groot vraag wentel om die onsekerheid of hy sy rol speel soos hy is en of hy iets anders moet word voor hy sy funksie vervul. Dit gaan, in die woorde van Medawar,¹³ nie hier om die kwessie van seltransformasie of metaplasie nie, maar of die sel die larwale vorm van 'n volwasse seltipe is.

Die aktiewe navorsing wat tans wêreldwyd aan die gang is, hou groot belofte vir die klinikus in. Een ding is seker: daar moet 'n reoriëntasie van kliniese denke teenoor die witselle kom, en dit kan begin deur die term 'witbloedselle' in teksboeke, onderwys, besprekings, en denke uit te roei en te vervang met die term 'witselle'. Dan sal 'n mens die witselle sien soos hulle is: 'Leucocytes are really not blood-cells.'¹⁵

1. Osgood, E. E. (1954): *Blood*, 9, 1141.
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3. Naegeli, O. (1931): *Blut Krankheiten und Blut diagnostik*. Berlyn: Springer.
4. Braunsteiner, H., Paertan, J. en Thumb, N. (1958): *Blood*, 13, 417.
5. Lewis, W. H. (1931): *Bull. Johns Hopk. Hosp.*, 49, 29.
6. McCutcheon, M. (1924): *Amer. J. Physiol.*, 69, 279.
7. De Bruyn, P. P. H. (1945): *Anat. Rec.*, 93, 295.
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9. Janeway, C. A. (1953): *Harvard Mem.*, 2, 164.
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13. Medawar, P. B. (1961): *Voorstellersrede*, Ciba Symposium, Biological Activity of the Leucocyte. Londen: Churchill.
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AORTIC STENOSIS

In a recent issue of the *Proceedings of Staff Meetings at the Mayo Clinic*¹ papers were published on the clinical course of patients with calcific aortic stenosis, the pathological features of this condition, and the surgical treatment of aortic stenosis by closed techniques and direct operation using hypothermia. This review has become

necessary in view of the surgical methods that permit reconstructive procedures on the aortic valve under direct vision.

The clinical picture in patients with aortic stenosis is not uniform, although there is some similarity. Variations arise from differences in the degree of obstruction of left

ventricular outflow and from varying ability of the left ventricle to maintain an adequate output, even when the same degree of stenosis is present. Many patients with the disease are aware of the presence of a heart murmur which they have had for a number of years without having experienced any disability. A slowly progressive process is the rule when aortic stenosis is secondary to rheumatic fever. Symptoms arise when the body has need for greater cardiac output, and much depends on the organ or tissue first affected. Thus, inadequate cerebral flow causes dizziness and syncope, while inadequate coronary flow causes angina and sometimes arrhythmias. When there is incomplete emptying of the left ventricle, with left atrial and pulmonary venous hypertension, dyspnoea appears.

In the Clinic series dyspnoea had been present for two months (up to twenty years in some instances) before operation. Symptoms develop with greatest frequency in the fifth and sixth decades in both calcific aortic stenosis and coronary atherosclerosis, which makes it difficult to assess the role of each of these conditions when patients with physical signs of aortic stenosis complain of angina. In severe aortic stenosis syncope is a significant finding during physical exercise. When left ventricular failure occurs, the terminal phase has begun.

The condition of calcific aortic stenosis may, however, be tolerated into advanced old age. The course may be relatively benign, but frequently it is more severe leading to irreversible congestive heart failure or sudden death,

unless the obstruction can be relieved. According to Gelfand² only 50 per cent of cases of aortic stenosis are recognized during life. The diagnosis should always be suspected when there is a systolic murmur at the base or apex, an aortic systolic thrill, and an absent or a diminished second aortic sound; a small pulse that rises and falls slowly may or may not be present. The history, radiographic study, and cardiac catheterization pressure studies make a proper diagnosis possible.

The gloomy prognosis in certain patients with aortic stenosis has led to the development of surgical procedures designed to relieve the obstruction to the left ventricular output produced by the stenotic aortic valve. Transventricular aortic valvotomy and retrograde approaches to the valve have been employed by various workers, and certain relatively recent procedures have been abandoned. The operative mortality has been high. The reduction in the gradient of pressure across the aortic valve has been inconstant, and aortic insufficiency and calcific emboli have been all too frequent. The techniques have also not permitted correction of associated aortic insufficiency, so that many patients desperately in need of help have had to be denied operation. At the Mayo Clinic the procedure of choice at the present time is an open operation using extracorporeal circulation.³

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