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CORRESPONDENCE

Lectins agglutination test as an epidemiological marker for *Neisseria gonorrhoeae*

Plant lectin-binding has been used to study the cell surface carbohydrate composition of bacteria and has revealed inter- and intra-strain variation.[1 2] The technique has been specifically applied to strains of *Neisseria gonorrhoeae* with up to 14 different lectins.[3 4]

Serotyping and auxotyping of *Neisseria gonorrhoeae* are not efficient means of discriminating between strains. Many strains exhibit the same pattern.[5] We applied the technique of lectin agglutination, using ten lectins to study 140 previously characterised strains of *N. gonorrhoeae* (Table 1). Twenty-two different patterns were shown but the groups 1, 2, 3, 4, 5, 6 and 7 were predominant. Seventy-nine per cent of the strains were represented in these groups. In this relatively small sample of strains, no statistically significant difference could be shown in the distribution of strains between serogroups 1A and 1B. However, when serotyping (1A and 1B) and auxotyping (prototrophs and prolina-dependent) are taken into account, the addition of lectin binding pattern markedly increases the number of potential discriminating groups (table 2). This method of typing was found to be reproducible and should be useful for epidemiologic studies.

Table 2 Distribution of strains into the different epidemiological markers

Serotype, Auxotype	*Number of strains*	*Number of agglutination groups*
IA, Prototrophs	13	7
IA, -Proline	18	9
IA, -Arginine	4	3
IA, -Metionine	1	1
IA, -Leucine	1	1
IA, -Proline -Arginine	2	2
IB, Prototrophs	69	16
IB, -Proline	14	6
IB, -Arginine	2	2
IB, -Metionine	1	1
IB, -Hypoxantine	4	4
IB, -Histidine	3	3
IB, -Lysine	2	2
IB, -Proline, -Arginine	5	5
IB, -Proline -Hypoxantine	1	1

It is important to note that 4·9% of strains did not agglutinate with *Triticum vulgaris* (WGA), as previously reported.[6] Use of this marker is therefore not an exclusive identification feature for *N. gonorrhoeae*.[2 7]

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Table 1 Agglutination patterns with lectins in 140 gonococcal strains

	ConA	*WGA*	*SBA*	*PNA*	*UEA*	*STA*	*PHA-LDBA*	*LcH*	*PSA*
1 (26·4)*	+	+	+	+	−	+	−	−	−	−
2 (16·7)	−	+	+	+	−	+	−	−	−	−
3 (11·1)	+	+	+	+	−	+	−	−	−	+
4 (10·4)	−	+	+	+	−	+	−	+	−	−
5 (6·9)	+	+	+	+	−	+	−	+	−	−
6 (4·2)	−	+	+	−	−	+	−	−	−	−
7 (4·2)	+	+	+	+	−	+	−	+	−	+
8 (2·7)	+	+	+	+	−	+	−	−	+	−
9 (2·7)	−	+	−	+	−	+	−	−	−	−
10 (2·1)	+	+	−	−	−	+	−	−	−	−
11 (2·1)	+	−	−	+	−	+	−	−	−	−
12 (1·4)	+	−	+	+	−	−	−	−	−	+
13 (1·4)	−	+	+	+	+	+	−	+	−	−
14 (1·4)	+	+	+	−	−	+	−	−	−	−
15 (1·4)	+	+	+	−	−	+	−	−	−	+
16 (0·7)	−	+	+	+	−	+	+	+	−	−
17 (0·7)	−	+	+	+	−	+	−	−	−	+
18 (0·7)	+	−	−	+	−	−	−	−	−	−
19 (0·7)	−	+	−	+	−	−	−	−	−	−
20 (0·7)	−	−	+	−	−	+	−	−	−	−
21 (0·7)	+	+	−	+	−	+	−	−	−	−
22 (0·7)	+	+	−	+	−	+	−	+	−	−

* % of strains.
Abbreviations: ConA (Concavalina A), WGA (*Triticum vulgaris*), SBA (*Glycine max*), PNA (*Arachis hipogaea*), UEA (*Ulex europaeus*), STA (*Solanium tuberosum*), PHA-L (*Phaseolus vulgaris*), DBA (*Dolichos bifloris*), LcH (*Lens culinaris*), PSA (*Pisum sativum*).

Trends in gonococcal infection: no room for complacency

Neisseria gonorrhoeae isolation rates can be used as markers of changes in sexual behaviour. *N gonorrhoeae* usually requires unprotected penetrative sexual intercourse for transmission, has a short incubation period and is easy to diagnose.

It has been previously noted by this unit that the *N gonorrhoeae* isolation rate had declined[1] and this decline has persisted (table). In 1983, 7% of patients presenting with a new complaint had gonorrhoea. This figure had declined to 2% in 1989 ($R = -0{\cdot}93$, $p < 0{\cdot}01$).

Of those presenting with gonorrhoea, the proportion of heterosexual men has increased significantly from