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

Table 2 Distribution of strains into the different epidemiological markers

Serotype, Auxotype	Number of strains	Number of agglutination groups
1A, Prototrophs	13	7
1A, -Proline	18	9
1A, -Arginine	4	3
1A, -Methionine	1	1
1A, -Leucine	1	1
1A, -Proline -Arginine	2	2
1B, Prototrophs	69	16
1B, -Proline	14	6
1B, -Arginine	2	2
1B, -Methionine	1	1
1B, -Hypoxanthine	4	4
1B, -Histidine	3	3
1B, -Lysine	2	2
1B, -Proline, -Arginine	5	5
1B, -Proline -Hypoxanthine	1	1

and proline-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.

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 identifica-

tion 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 hypogaea*), UEA (*Ulex europaeus*), STA (*Solanum 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 declined¹ 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 = -0.93, p < 0.01).

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