

ABO BLOOD GROUPS AND CARCINOMA OF PANCREAS

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In a combined series of 620 patients with carcinoma of the pancreas collected from many centres in the British Isles (Aird, Lee, and Roberts, 1960) it was found that there was evidence of some strength that carcinoma of the pancreas was commoner in persons of group A than in persons of blood group O or B. However, they stressed that it was possible that some of these cases may have been due to tumours of the bile ducts or of the ampulla of Vater. This paper presents the findings in an additional 119 patients.

MATERIALS.

The data were derived from the case records of 119 in-patients who were treated in the Belfast hospitals during an eight-year period, 1953-1960 inclusive. There were 74 males and 45 females. All patients had laparotomy with a macroscopic diagnosis of the tumour, or a post-mortem examination with histological confirmation of the diagnosis. The patients and blood donor controls were drawn from the same population. The ABO blood group distribution was known for a large series (11,327) of current blood donors normally resident in the County Borough of Belfast.

TABLE 1.
DISTRIBUTION OF 119 PATIENTS WITH CARCINOMA OF THE PANCREAS
BY THE ABO BLOOD GROUP COMPARED WITH THE DISTRIBUTION
EXPECTED FROM THE CONTROLS.

BLOOD GROUP	PATIENTS		CONTROLS		χ^2
	TOTAL No.	PERCENTAGE	PERCENTAGE		
A	36	30.26	37.01	1.460	
O	56	47.08	48.75	0.070	
B+AB	27	22.66	14.24	5.974	
TOTAL	119	100.0	100.0	7.504	

Comparisons of ABO distributions between patients and controls.

Blood groups A and AB combined for χ^2 test.

$\chi^2=7.504$

d.f. = 2

$0.05 > P > 0.02$

RESULTS.

Table 1 shows the ABO distribution of the 119 patients compared with that expected from the 11,327 controls. There was a significant difference ($P > 0.05$)

between the observed and expected distributions. About 23 per cent. of the patients were blood group B and AB combined in contrast to only about 14 per cent. of the combined values in the controls ($\chi^2=7.504$; $0.05>P>0.02$).

DISCUSSION.

Woolf's (1955) method has been used to compare and combine these data with some of those from the literature (Table 2).

TABLE 2.
CARCINOMA OF THE PANCREAS.
RELATIVE INCIDENCE IN PERSONS OF GROUP A COMPARED WITH
INCIDENCE OF ONE IN PERSONS OF GROUP O.

CENTRE	TOTAL NUMBER OF PATIENTS	RELATIVE INCIDENCE A:O	χ^2	P
1. London	109	1.56	4.50	$0.05>P>0.02$
2. Birmingham	53	1.03	0.01	$0.95>P>0.90$
3. Bristol	54	1.18	0.31	$0.70>P>0.50$
4. Cardiff	43	1.39	0.97	$0.50>P>0.30$
5. Liverpool	133	1.52	5.36	$0.05>P>0.02$
6. Manchester	78	0.81	0.77	$0.50>P>0.30$
7. Sheffield	26	3.87	7.15	$0.01>P>0.001$
8. Leeds	22	0.84	0.14	$0.80>P>0.70$
9. Newcastle	40	1.36	0.82	$0.50>P>0.30$
10. Glasgow	62	0.85	0.33	$0.70>P>0.50$
11. Belfast	119	0.85	0.57	$0.50>P>0.30$
Mean weighted relative incidence		1.18		
χ^2	Total		20.93	
	Diff. from unity d. of f.= 1		4.39	$0.50>P>0.02$
	Heterogeneity d. of f.= 10		16.54	$0.10>P>0.05$

Sources of material: 1-10 (Aird et al., 1960).

In London, Liverpool, and Sheffield the estimated incidence of carcinoma of the pancreas in persons of blood group A is significantly greater than in those of blood group O. There is no evidence of significant heterogeneity between the areas and the difference from unity is just significant at the 5 per cent. level. The Belfast data does not support the suggested association between blood group A and carcinoma of the pancreas. There is, in fact, a deficiency of blood group A as compared with blood group O and an excess of blood group B.

SUMMARY.

The ABO blood group distribution in 119 patients with carcinoma of the pancreas showed a deficiency of blood group A and an excess of blood group B when compared with the controls.

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REFERENCE.

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