ECG ABNORMALITIES IN RURAL AREAS OF
EAST AZERBAIJAN, NORTHWEST IRAN

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ABSTRACT

A survey was carried out in the summer of 1972 in East Azerbaijan, northwest Iran, to determine the prevalence of cardiovascular diseases. ECG tracings were prepared from 198 women and 178 men aged 40-60. Only 45% of the tracings were completely normal. Q/QS abnormalities were found in 4.7% of tracings, left axis deviation in 4% tall R wave in 3.7%, ST depression in 3.9% of men and 14.1% of women and T wave inversion in 2.2% of men and 11.6% of women. Further studies are recommended to explain this high prevalence of ST depression and T wave inversion in the women of this area.

INTRODUCTION

Degenerative cardiovascular diseases are known to be an important cause of death(6) and morbidity(1) in Iran, but so far community studies have not been undertaken to determine the prevalence of these disorders in this country.

In the summer of 1972, a special survey was carried out to determine the prevalence of degenerative cardiovascular diseases in rural areas of East Azerbaijan, a province in the northwestern part of Iran. The results of blood pressure readings taken in this survey have been reported by Nadim et al.(7)

The present paper shows the ECG analysis of 198 women and 178 men examined in this survey.

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TABLE No. 9
MIXED INFECTIONS IN SICK AND HEALTHY CHILDREN

MULTIPLE INFECTIOUS AGENTS	LOW		HIGH		TOTAL
	SICK	HEALTHY	SICK	HEALTHY	
BV	8	1	11	-	20
PV	9	6	3	-	18
BP	4	-	1	-	5
BVP	-	-	3	-	3
BF	2	-	-	-	2
BPF	1	-	-	-	1
BB	-	-	2	-	2
VF	1	-	1	-	2
BBP	-	-	-	1	1
FH	2	3	-	2	7
HHH	1	-	-	-	1
PP	1	-	-	-	1

B = BACTERIA   V = VIRUS   P = PROTOZOA   H = HELMINTH   F = FUNGI

TABLE No. 10
INCIDENCE OF MOST COMMON CLINICAL MANIFESTATIONS IN PATIENTS FROM WHOM PATHOGENIC ORGANISMS, ALONE OR IN COMBINATION WITH OTHERS, WERE ISOLATED.

ORGANISMS / SYMPTOMS	BACTERIA ALONE				BACTERIA WITH										GIARDIA WITH						HELMINTH WITH				FUNGI WITH			NO PATHOGENS	TOTAL PATIENT EXCLUDING VIRUS
	SALMONELLA	SHIGELLA	PATH. E. COLI	TOTAL	TWO BACTERIA	VIRUS	GIARDIA	HELMINTH	FUNGI	GIARDIA VIRUS	HEL. VIRUS	FUNGI PAR.	GIAR. HELM.	TOTAL BACTERIA	ALONE	VIRUS	HELMINTHS	OTHER PAR.	VIR. OTHER PAR.	TOTAL	ALONE	2 HELM.	VIRUS	TOTAL	ALONE	WITH VIRUS	TOTAL		
VOMITING	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
FEVER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	6	7
DIARRHOEA	6	4	5	15	1	7	1	1	-	2	-	1	1	29	9	5	1	1	1	22	1	1	1	6	7	1	10	44	103
DIAR + VOMIT	3	1	-	4	-	-	-	-	-	-	-	-	-	4	3	1	-	-	-	4	-	-	-	-	1	-	1	4	12
DIAR + FEVER	5	5	4	14	1	9	1	-	2	-	1	-	1	29	3	3	-	-	-	8	-	-	-	2	3	1	6	29	69
DIAR + BLOOD	-	3	-	4	-	1	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6
UNKNOWN	1	-	-	1	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL	15	13	10	38	2	19	2	1	2	2	1	1	2	70	15	9	1	1	1	34	2	1	1	9	11	2	17	85	199

TABLE No. 7

SEASONAL DISTRIBUTION OF ENTEROPATHOGENS OF THE HEALTHY & SICK INDIVIDUALS BY SOCIOECONOMIC CLASS

HEALTH & CLASS	SICK (LOW)				SICK (HIGH)				HEALTHY (LOW)				HEALTHY (HIGH)			
SEASON / ORGANISMS RECOVERED	SP	SU	AU	WIN	SP	SU	AU	WIN	SP	SU	AU	WIN	SP	SU	AU	WIN
SALMONELLAE	5 (12.1)	11 (18.6)	1 (4.5)	2 (11.7)	5 (7.7)	7 (13.7)	0 —	0 —	1 (10)	0 —	0 . —	0 —	0 —	2 (8.7)	1 (5.9)	0 —
SHIGELLA	5 (12.1)	3 (8.5)	0 —	0 —	15 (38.4)	2 (3.9)	0 —	1 (5.9)	0 —	1 (9)	0 —	0 —	0 —	0 —	1 (5.9)	0 —
PATH E.COLI	2 (4.8)	1 (1.7)	1 (4.5)	1 (5.9)	3 (7.7)	6 (11.7)	1 (4.5)	0 —	0 —	0 —	0 —	0 —	0 —	2 (8.7)	0 —	0 —
PROTOZOA & HELMINTH	5 (12.2)	13 (22)	4 (18.1)	7 (41.2)	6 (15.4)	3 (5.9)	8 (36.3)	3 (17.7)	5 (50.00)	2 (18.2)	2 (33.3)	10 (100)	0 —	2 (8.7)	4 (23.52)	7 (35.00)
FUNGI	2 (4.9)	5 (8.5)	1 (4.5)	3 (17.6)	0 0	4 (7.8)	1 (4.5)	0 —	0 —	0 —	0 —	1 (10)	0 —	0 —	0 —	0 —
TOTAL NUMBER TESTED	41	59	22	17	39	51	22	17	10	11	6	10	8	23	17	20

TABLE No. 8

DISTRIBUTION OF ENTEROPATHOGENS ACCORDING TO THE AGE BY SOCIOECONOMIC CLASS IN HEALTHY AND SICK INDIVIDUALS

HEALTH & CLASS	SICK (LOW)			SICK (HIGH)				HEALTHY (LOW)			HEALTHY (HIGH)		
AGE / ORG. RECOVERED	0–<2	2–<4	4–7	0–<2	2–<4	4–7	UN-KNOWN	0–<2	2–<4	4–7	0–<2	2–<4	4–7
NOS TESTED & PERCENTAGE	85	26	28	74	28	35	2	13	6	18	21	18	29
SAL.TYPHIMURIUM	11(12.9)	2(7.7)	2(7.1)	3(4)	1(3.6)	—	1	—	—	—	1(4.7)	—	—
SALMONELLAE	3(3.5)	1(3.8)	—	6(8.1)	1(3.6)	—	—	—	—	—	1(4.7)	1(0.5)	—
SHIGELLA	3(3.5)	1(3.8)	4(14.2)	5(6.7)	9(32.1)	4(11.4)	—	—	—	1(5.5)	—	—	1(3.4)
PATH.E.COLI	2(2.3)	2(7.7)	1(3.5)	8(10.8)	1(3.6)	—	—	—	—	—	1(4.7)	1(5.5)	—
PROTOZOA	4(4.7)	6(23)	11(39.3)	1(1.3)	9(32.1)	6(17.1)	—	1(7.7)	1(16.6)	10(55.5)	1(4.7)	2(11.1)	5(17.2)
HELM.OVA		2(7.7)	5(17.8)	—	2(7.1)	2(5.7)	—	—	2(33.3)	5(27.8)	—	—	5(17.2)
FUNGI	7(8.23)	4(15.4)	—	5(6.7)	—	—	—	—	—	1(5.5)	—	—	~

TABLE No. 5

DISTRIBUTION OF BACTERIAL AGENTS RECOVERED FROM HEALTHY AND SICK, BY SOCIAL CLASS

HEALTHY & CLASS	NO. TESTED	SALMONELLAE		SHIGELLA		PATH. E.COLI	
HEALTHY (LOW)	37	SAL. JAVA	1	SH.DYS. II	1	0	
SICK (LOW)	139	SAL.TYPHIMURIUM „ ADELAID „ BRAENDERUP „ VIRGINIA „ BRON	15 1 1 1 1	SH.FLEX. II SH.FLEX. VI SH.SONNEI	3 2 3	0 : B 86 7 0 : B 111 4 0 : B 125 15 0 : B 126 16 0 : B 128 12	1 1 1 1 1
HEALTHY (HIGH)	66	SAL.TYPHIMURIUM „ BRAENDERUP „ SENFTENBERG	1 1 1	SH.SONNEI	1	0 : B 55 5 0 : B 125 15	1 1
SICK (HIGH)	129	SAL.TYPHIMURIUM „ CERRO „ ADELAID „ HAIFA „ LIVINGSTONE „ BRAENDERUP „ HAVANA	5 2 1 1 1 1 1	SH.DYS. III „ FLEX II „ „ III „ „ VI „ „ UNTYPABLE „ BOYDII X „ SONNEI „ UNTYPABLE	1 1 1 2 1 1 10 1	0 : B 111 4 0 : B 125 15 0 : B 127 8 0 : B 128 12 0 : B 86 7	4 2 1 2 1

TABLE No. 6

DISTRIBUTION OF PROTOZOA AND HELMINTHS' OVA RECOVERED FROM HEALTHY AND SICK, BY CLASS

HEALTHY & CLASS	NO. TESTED	PROTOZOA		HELMINTHS' OVA	
HEALTHY (LOW)	37	GIARDIA E. HISTOLYTICA	11 1	HYMENOLEPIS NANA ENTEROBIUS VERM.	6 1
SICK (LOW)	139	GIARDIA E. HISTOLYTICA E. HISTOLYTICA (SMALL RACE)	19 1 1	HYMENOLEPIS NANA ASCARIS LUMB. ENTEROBIUS VERM. TRICHURIS TRICHURA	3 2 1 1
HEALTHY (HIGH)	68	GIARDIA E. HISTOLYTICA (SMALL RACE)	7 1	ASCARIS LUMB. HYMENOLEPIS NANA TRICHURIS TRICHURA	3 1 1
SICK (HIGH)	129	GIARDIA E. HISTOLYTICA	15 1	ASCARIS LUMB.	4

Comparison with results of other studies

There have been several reports on ECG abormalities from various parts of the world, e.g. Ostrander *et al.* (1965) 11), Higgins *et al.* (1965) (5), Aschroft *et al.* (1970) (1) and Koate *et al.* (1972) (7). We have tried to compare our results with those reported and reviewed by Higgins (5) and Maill *et al.* (8).

In Table IV, we have compared out results with those reported by Higgins *et al.* from Frammingham, South Wales and Jamaica. It can be seen that in the men of our study, major Q/QS abnormalities are similar to those reported from Frammingham and South Wales, but are about 1/3 of those reported from Jamaica. In the women of our study, however, these are even higher than the figures reported from Jamaica. Tell R wave in the women of our study is less than in all the above-mentioned reports.

ST depression in men is more than what has been reported from Frammingham and South Wales, but less than that of Jamaica. In the women of our study, however, this abnormality is exlremely high (14.1%). Negative T wave T wave in the men of our study is similar to what has been reported in other studies, but in the women it is almost 3 times higher than what has been reported from Jamaica.

In Table V, we have compared our results in men aged 40-49 with those reported by Miall *et al.* in 1972, comparing the findings of several studies in different parts of the world. Major Q/QS items in the men of our study are more than what have been reported in other studies, but minor Q/QS items are less than in other studies except that of Frammingham.

Left axis deviation is a little less than what has been reported in other studies. Tall R wave is much less than what has been reported from Jamaica and Moscow, but more than what was reported from Tecmuseh and Brussels. ST depression in the men of our study is less than what is reported from Jamaica, but a little more than that of other places compared. T wave abnormalities are 1/3 of what has been reported from Jamaica and 1/2 of that of Frammingham, but more than what has been reported from Brussels, the Hague and Moscow.

DISCUSSION

It is very difficult to decide about the criteria of ischemic heart disease in a survey. Angina Pectoris is not a reliable sign and other clinical criteria are not valid.

In population surveys, electrocardiography may be used as a tool to measure the prevalence of ischemic heart disease but it should be remembered that abnormal ECG by itself can only be an indication of the disease. Furthermore, as mentioned by Segall and Epstein (3-12) and by Schettler and Boyd (11), it is not always easy to differentiate an abnormal ECG tracing from a

TABLE IV   Comparison of ECG's in East Azerbaijan with those of some other countries(a) for both sexes

ECG Items	M Iran (40-60) 178 men No.	%	M Framing. (30-62) 2336 men No.	%	M Rhondda (35-64) 537 men No.	%	M Jamaica (35-65) 269 men No.	%	F Iran (40-60) 198 No.	%	F Framing. (30-62) 2873 women No.	%	F Jamaica (35-64) 279 women No.	%
Q waves 1 1-2	3	1.6	42	1.8	7	1.3	11	4.1	6	3.03	39	1.4	7	2.5
Tall R waves 3-1	6	3.3	182	7.8	25	4.7	52	19.3	4	2.2	66	2.3	28	10
ST depression 4 1-3	7	3.9	63	2.6	34	6.3	8	3	28	.14.1	97	3.4	20	7.2
T inversion 5 1-2	4	2.2	52	2.2	22	4.1	7	2.6	23	11.6	58	2	10	3.6
Flat T waves 5:3	5	2.8	176	7.5	14	2.6	23	8.3	19	9.6	256	8.9	32	11.5

(a)   Higgins et al.:   The ECG in epidemiological studies; reproducibility, validity and international comparability.   Brit. J. Prev. Med. 19:53 (1965).

normal one. Different studies have shown that abnormal ECG tracing is found in a considerable proportion of apparently healthy people, but it has also been shown (5,9) that the risk of developing frank I.H.D. is 3 to 6 times greater in these persons as compared with those with normal ECG.

We observed 18 cases with Q/QS abnormalities, 5 of which occurred only in V1 - V3 and 4 others only in V1 - V2. Another codable Q was seen only in a VL. Therefore, cases with definite Q/QS abnormalities are reduced to 8 or 2.1% of all the tracings. This is similar to what is reported from other countries.

Tall R wave is relatively rare in our study as compared with those reported from other places such as Jamaica. This may perhaps be due to a lower prevalence of hypertension in our study group or it may be due to other factors. Miall *et al.* (1972) mentioned that normal ranges of R wave may be different in different ethnic groups. Koate *et al.* (1972) have reported tall R wave (between 35 to 47 mm) in leads I, a VL, V4, V5 and V6 in completely healthy individuals in Senegal.

ST depression and T wave abnormalities are very prevalent in the women of our study. Most of these cases have shown the abnormalities in righl precardial leads. These abnormalities are not always related to I.H.D. They might be due to electrolyte imbalance, anxiety, anaemia, cigarette smoking and many other causes. Further studies are needed to explain the very high prevalence of T wave abnormalities, especially in the women of this area.

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TABLE I ECG Abnormalities seen in 376 persons examined in East Azerbaijan, Iran
June — July, 1972

Minnesota Code	Description of Abnormality	No.	%
1-1-3=	Q duration $>$ 0.04 sec plus R$>$3 in a VL	1	0.26
1-1-7=	QS pattern in all leads V_1V_4, V_1V_2 or V_1V_6	2	0.53
1-2-3=	QS pattern in lead II	1	0.26
1-2-7=	QS pattern in all of leads V_1 through V_3	5	1.32
1-3-2=	QS pattern in absence of code 3-1, in each of leads V_1 and V_2	4	1.06
1-3-4=	Q duration of at least 0.03 sec and less than 0.04 sec in lead III plus Q wave of at least 1 amplitude in lead a VF	1	0.26
1-3-5=	Q duration of at least 0.03 sec and less than 0.04 sec in lead a VF	1	0.26
1-3-6=	QS pattern in each of leads III and a VF	3	0.79
2-1=	QRS axis from - 30 through - 90 (left axis)	15	3.98
2-2=	QRS axis from +120 through –150 (right axis)	1	0.26
2-3=	QRS axis from +90 through 119° (right axis)	14	3.72
2-5	(Intermediate axis) QRS axis approximately 90° from the frontal place	2	0.53
3-1=	(Left V.H.) = R$>$ 26 mm in either leads V_5 or V_6 or$>$20 mm in any of leads I, II, III, a VF or R / 12 mm in a VL	10	2.66
3-3=	(Left V.H.) R amplitude $>$ 15 and $>$ 20 mm in I or R in V_5 or V_6	4	1.06
4-1=	S-T-J depression $>$ 1 mm and ST segment horizontal or downward-sloping in any leads, I, II, a ,1,2,3,4,5,6 plus S in $V_1 >$ 35 mm	7	1.86

Code	Description		
4-2=	S-T-J depression at least 0.5 mm and less than 1 mm and ST segment horizontal or downward-sloping in any of leads I, II, aVL, aVF, $V_{1,2,3,4,5,6}$	23	6.11
4-3	No S.R-J depression as much as 0.5 mm but ST segment downward-sloping and segment or T wave nadir at least 0.5 mm below baseline in any of leads I, II, aVL, $V_{1,2,3,4,5,6}$	5	1.32
4-4=	S-T-J depression >1 mm and ST segment upward-sloping, or U-shaped in any leads I, II, aVL, $V_{1,2,3,4,5,9}$	3	0.79
5-1=	T amplitude $>$-5 mm in any of leads of I, II, ,3,4,5,6 or in a VL when R $>$ 5 mm or in aVF when RQS is mainly upright	**3**	0.79
5-2=	T amplitude negative or diphasic with negative phase at least -1 mm but $>$-5 mm in any of leads I, II, $V_{2,3,45,6}$ or in a VL when R $>$ 5 mm or in aVF when RQS' is mainly upright	24	6.38
5-3=	T flat or negative or diphasic with less than 1 mm negative phase in the same conditions mentioned above	24	6.36
6-3=	P-R (P-Q) interval $>$ 0.22 sec in any of leads I, II, III, aVL, aVF	1	0.26
6-4=	W.P.W.		
6-5=	Short P-R (P-Q) interval (Lown-Ganong-Levine Syndrome)	1	0.26
7-1=	Complete left bundle branch block	1	0.26
7-2=	Complete right bundle branch block	1	0.26
7-5=	R-R' not meeting criteria of 7-3 in either of leads of V_1 or V_2	2	0.53
7-6=	Incomplete left bundle branch block	1	0.26
8-1=	Frequent premature atrial, nodal or ventricular beats	7	1.86

8-7 =	Sinus tachycardia	15	3.98
9-1 =	Low QRS amplitude	30	7.98
9-2 =	ST segment maximum elevations > 1 mm in any leads: I, II, III, aVL, aVF,		
9-3 =	V_5-V_6 or ST segment maximum elevation $\geqq$ 2 mm in aany leads : $V_{1,2,4,5}$	3	0.79
9-4-1 =	P wave amplitude > 2.5 mm in any leads II, III, aVF	7	1.86
9-4-2 =	QRS transition zone to right of lead V_3	45	11.96
9-5 =	QRS transition zone at lear V_4 or to the left of V_4	49	13.03
9-8 =	T wave aamplitude $>$12 mm in any of leads I, II, III, aVL, aVF, $V_{1,2,3,4,5,9}$	4	1.06
—	Findings questionable	18	4.78
	Normal	171	45.47

Table II Frequency distribution of E C G Abnormalities by age and sex, east Azarbaigan Iran June-July, 1972

Minnesota Code Item	M 40-50 137 Cases No.	%	M 51-60 41 Cases No.	%	M Total 178 Cases No.	%	F 40-50 152 Cases No.	%	F 51-60 46 Cases No.	%	F Total 198 Cases No.	%	Total 376 Cases No.	%
1:1	3	2.19	4	9.75	7	3.93	6	3.94	5	10.89	11	5.55	18	4.78
2														
3														
2-1	6	4.37	4	9.75	10	5.61	3	1.97	1	2.17	4	2.02	14	3.72
2:2	5	3.64	5	12.19	10	5.61	4	2.63	1	2.17	5	2.52	15	3.96
3														
3:1	4	2.92	2	4.87	6	3.37	5	3.23	4	8.69	9	4.54	15	3.98
3														
4:1	7	5.1	2	4.87	9	5.0	27	17.76	2	4.34	29	14.6	38	10.1
2														
3														
4														
5:1	5	3.64	4	9.75	9	5.0	37	24.34	5	10.89	42	21.2	51	13.65
2														
3														
6-3	0		0		0		1	0.65	0		1	0.5	1	0.26
6-4	1	0.72	0		1	0.56	0		0		0		1	0.26
6-5	0		0		0		1	0.65	0		1	0.5	1	0.26
7-1	0		0		0		0		1	2.17	1	0.5	1	0.26

7-2	0		1	2.43	1	0.56	0		0		0	0.5	1	0.26
7-5	1	0.72	0		1	0.56	0		1	2.17	1	0.5	2	0.53
7-6	0		0		0		1	0.65	0		1	0.5	1	0.26
8-1	2	1.44	1	2.43	3	1.68	3	1.97	1	2.17	4	2.08	7	1.86
8-7	4	2.92	0		4	2.24	9	5.92	2	4.34	11	5.55	15	3.98
9-1	6	4.37	3	7.3	9	5	13	8.55	8	17.38	21	10.6	30	7.96
9-2	3	2.19	0		3	1.68	0		0		0	0	3	0.79
9-3	3	2.19	1	2.43	4	2.24	2	1.3	1	2.17	3	1.5	7	1.86
9-4-1	16	11.67	5	12.19	21	11.97	20	13.15	2	4.34	22	11.1	4.?	11.43
9-4-2	18	13.13	9	21.9	27	15.16	16	10.52	6	13	22	11.1	49	13.0
9-5	4	2.92	0		4	2.24	0		0		0		4	1.0

TABLE III ECG Abnormalities by Blood Pressure Categories
(Normotensive-Borderline-Hypertensive) in rural areas of
Azerbaijan, June – July, 1972

Code Item No. / BP	F No.	E.C.G. Normal	1:1 (2 3)	2-1	3-1	4:1 (2 3 4)	5:1 (2 3)	8-1	8-7	M No.	E.C.G. Normal	1:1 (2 3)	2-1	3-1	4:1 (2 3 4)	5:1 (2 3)	8-1	8-7
Normo-tensives	137	102 / 74.45	8 / 5.83	9 / 6.56	2 / 1.44	20 / 14.59	30 / 21.89	2 / 1.44	7 / 5.1	143	134 / 93.7	6 / 4.19	5 / 3.49	2 / 1.39	4 / 2.78	2 / 1.78	2 / 1.78	3 / 2
Border-lines	27	20 / 74.06	2 / 7.4	0 / 0	1 / 3.7	2 / 7.9	4 / 14.8	0 / 0	2 / 7.4	22	18 / 81.8	1 / 4.95	0 / 0	2 / 9.0	3 / 13.6	4 / 18.0	1 / 4.5	0 / 0
Hyper-tensives	33	20 / 60.6	1 / 3.03	0 / 0	1 / 39.3	7 / 21.2	8 / 24.2	2 / 6.06	3 / 9.09	12	7 / 58.3	0 / 0	1 / 8.3	2 / 16.6	2 / 16.6	3 / 25	0 / 0	0 / 0

TABLE V   Comparison of the Prevalence of ECG Abnormalities in East Azarbaijan with those of other countries[a] for men aged 40-49

Code / Number Examined	Iran 137		Jamaica 177		Framming. 779		Tecumseh 542		Brussels 611		the Hague 377		Naples 412		Moscow 109	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Major Q/QS items 1 11, 1 1, 1 21	2/3	2.1	1 2	1.7	1 8	1.2	3 2	0.9	2 6	1.1	1 2	.18	5 3	1.9	0 3	1.8
Left axis deviation 1	4	2.9	6	3.4	23	3.0	22	4.1								
High amplitude R waves3 1	3	2.1	53	29.9	51	6.5	9	1.7	10	1.6	18	4.3	14	3.4	29	17.2
ST depression 4-1-2-3	4	2.9	1 5 2	4.5	5 7 5	2.2	2 4 3	1.7	1 6	1.3	3 2	1.3	1 9 1	2.7	1	0.6
T waves inversion 5-1-2	1	0.73	1 6		1		8		1 6	2.1			7			
T waves flattening 5-3	4	2.9	11	10.2	52	8.1	34	7.7	6		6			4.6	4	2.4
L.B.B.B. 7 1	0	0	-	-	3	0.4	1	0.2					1	0.2	-	-

(a) Miall et al.: Longitudinal study of heart disease in a Jamaican rural population.

FIG. No. 3

ECG ABNORMALITIES BY BLOOD PRESSURE CATEGORIES (NORMOTENSIVE - BORDERLINE - HYPERTENSIVE)
IN RURAL AREAS OF AZERBAIJAN, JUNE – JULY 1972