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Prevalence of High Blood Pressure In Qashqai Tribe, Southern Iran, 1973*

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A health and morbidity survey was conducted among Qashqai Tribe of Southern Iran in 1973. In this cross-sectional survey, an attempt was made to study the prevalence of high blood pressure in this tribe. This report presents the results obtained in this regard.

Materials and Methods:

Qashqai is a Turkish ethnic tribal and is one of the largest and best organized tribal groups of Southern Iran. It is best defined by political and geographical criteria. This tribe consists of tent dewellers, postoral sheep raising nomade who with regular and periodic seasonal movements migrate to the arid-Zones and mountainous areas of the province of Fars, south of Iran. A rough estimate of the total of 20,000 migratory tents or households exist in this tribe.

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Sampling:

The formal frame work of tribal organization of Qashqai tribe in descending order is: Tribe (il), clan (Tayefe), subclan (Tireh), section (obeh or bankou) and household (tent or family). The estimated household list prepared by interviewing the heads of clan and sub clan plus the statistics from Malaria Eradication unit, Ministry of Health Iran.

The procedure used for sampling was basedon the two stages:

i) In the first stage of sampling the original sample was selected by two-stages (olan-subolan) randomized cluster sampling and 2929 households (16393 persons) were interviewed.

ii) The second stage of sampling was the selection of households for the medical examination from the original sample population. The procedure was based on the two stages (subclan-obeh) random sampling. When a number of household belonging to an obeh appeared in the sample, all household in that obeh were included in the sample.

Over all, 21 obehs consisting of 620 households or 3584 persons were selected for medical examination.

Blood pressure was measured routinely of all persons aged 35 years and over in the sample population for medical examination, in a sitting position with an aneroid instrument (sphygmanometer Erka) made in Germany and checked at frequent intervals. The systolic pressure recorded at the appearance of the first sound when the cuff is deflated slowly and diastolic the point of disappearance of the sounds. Blood pressure determination performed once on each person.

Results and Discussion:

Data on the blood pressure of persons aged 35 and over are presented in tables 1,2 and figures 1,2.

Table 1. Distribution of systolic blood pressure according to age (aged 35 years and over) and sex Qashqai tribe, 1973.

Systolic blood pressure	Male		Female		Total	
	No.	%	No.	%	No.	%
80-89	5	1.3	3	0.8	8	1.1
90-99	12	3.2	11	3.0	23	3.1
100-109	39	10.3	50	13.5	89	11.9
110-119	70	18.5	55	14.9	125	16.7
120-129	135	35.7	80	21.7	215	28.8
130-139	48	12.7	56	15.2	104	13.9
140-149	31	8.2	54	14.6	85	11.4
150-159	14	3.7	20	5.4	34	4.5
160-169	7	1.8	15	4.1	22	2.9
170-179	6	1.6	7	1.9	13	1.7
180-189	3	0.8	5	1.3	8	1.1
190-199	1	0.3	2	0.5	3	0.4
200+	7	1.8	11	3.0	18	2.4
Total	378	50.6	369	49.4	747	100.0

Table 2, Distribution of Diastolic Blood Pressure According to Age (aged 35 years and over) and sex, Qashqai Tribe, 1973.

Diastolic Blood Pressure	Male		Female		Total	
	No.	%	No.	%	No.	%
40–49	6	1.6	12	3.2	18	2.4
50–59	15	4.0	18	4.9	33	4.4
60–69	25	6.6	20	5.4	45	6.0
70–79	80	21.2	81	21.9	161	21.6
80–89	163	43.1	113	30.6	276	36.9
90–99	59	15.6	81	21.9	140	18.7
100–109	15	4.0	28	7.6	43	5.7
110–119	6	1.6	8	2.2	14	1.9
120+	9	2.4	8	2.2	17	2.3
Total	378	50.6	369	49.4	747	100.0

Table 1 shows the frequency distribution of systolic blood pressure. Mean SBP is 127.2 mm and 131.6 mm for males and females respectively.

Table 2 is presented the frequency distribution of diastolic blood pressure. Mean DBP is 83.4 mm and 84.1 mm for males and females respectively.

All these data show that blood pressure tends to be a little higher in women than in men in this age group.

For presenting sex differences in hypertension frequency the criteria used for the study are based on the recommendation of a WHO Expert Committee on Hypertension and coronary heart disease (WHO 1959). According to the definition the following cut off points be used:

a) Systolic blood pressure below 140 mm Hg and diastolic blood pressure 90 mm Hg; both below=normotensive;

b) Systolic Blood pressure 160mm Hg. or more, diastolic blood pressure 95 mm Hg or more; both above these levels = hypertensive.

c) Systolic blood pressure less than 16 mm Hg and diastolic less than 95 mm Hg but above 90 mm Hg = to borderline.

Accroding to these definitions table 3 shows that the prevalence of high blood pressure is higher in females as compared with males (10.9 percent in females and 6.4 percent in males). The difference being statistically significant (x^2=4.3034 - 0.01 < P < 0.05)
The highest rate occurs in females aged 55 to 64 years who show a prevalence rate of 21.7 percent. The prevalence of high blood pressure among males in the same age group was found to be 9.7 percent.

It also can be seen from table 3 that the prevalence of hypertension is higher in females aged 55 to 64 years as compared with other age groups, and then decreases from 21.7 percent to 21.3 percent in the age group of 65 years and over. The difference of prevalence of high blood pressure among females and males in the age group of 55 to 64 is

not statistically significant (x^2=2.7622 and P > 0.05).

Study among some other nomadic population has shown that high blood pressure uncommon. (Truswell et al. 1969). Our figures from the Qashqai Tribe show that hypertension is by no means a rare condition among the nomadic population of Iran, and it shows the similar pattern of that of the rural areas of East Azarbaijan(Nadim et al 1973).

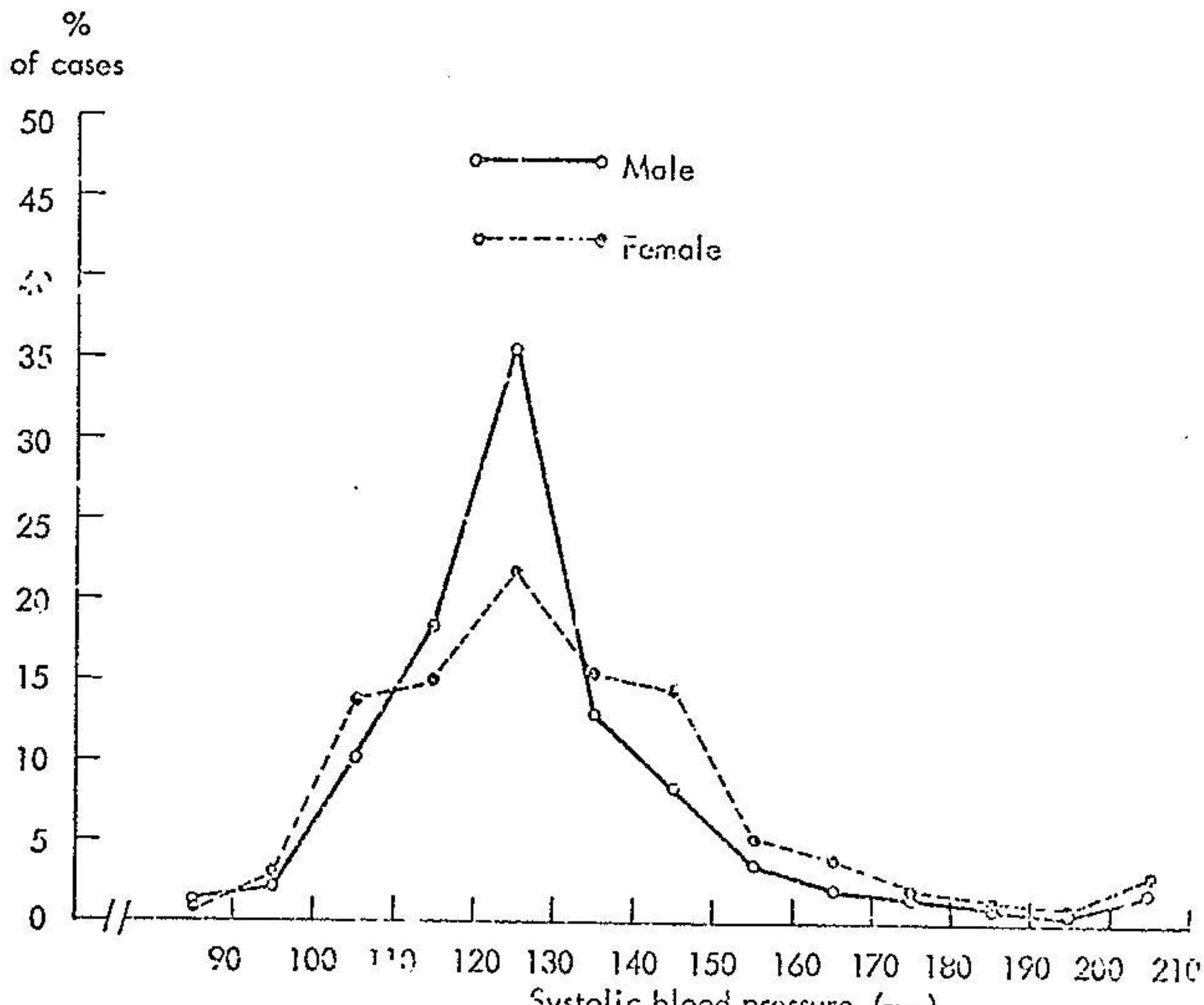
In our survey the prevalence of high blood pressure shows the pattern of increase with the increase of age in contrast to other surveys where it does not increase with age (Truswell et al., 1969).

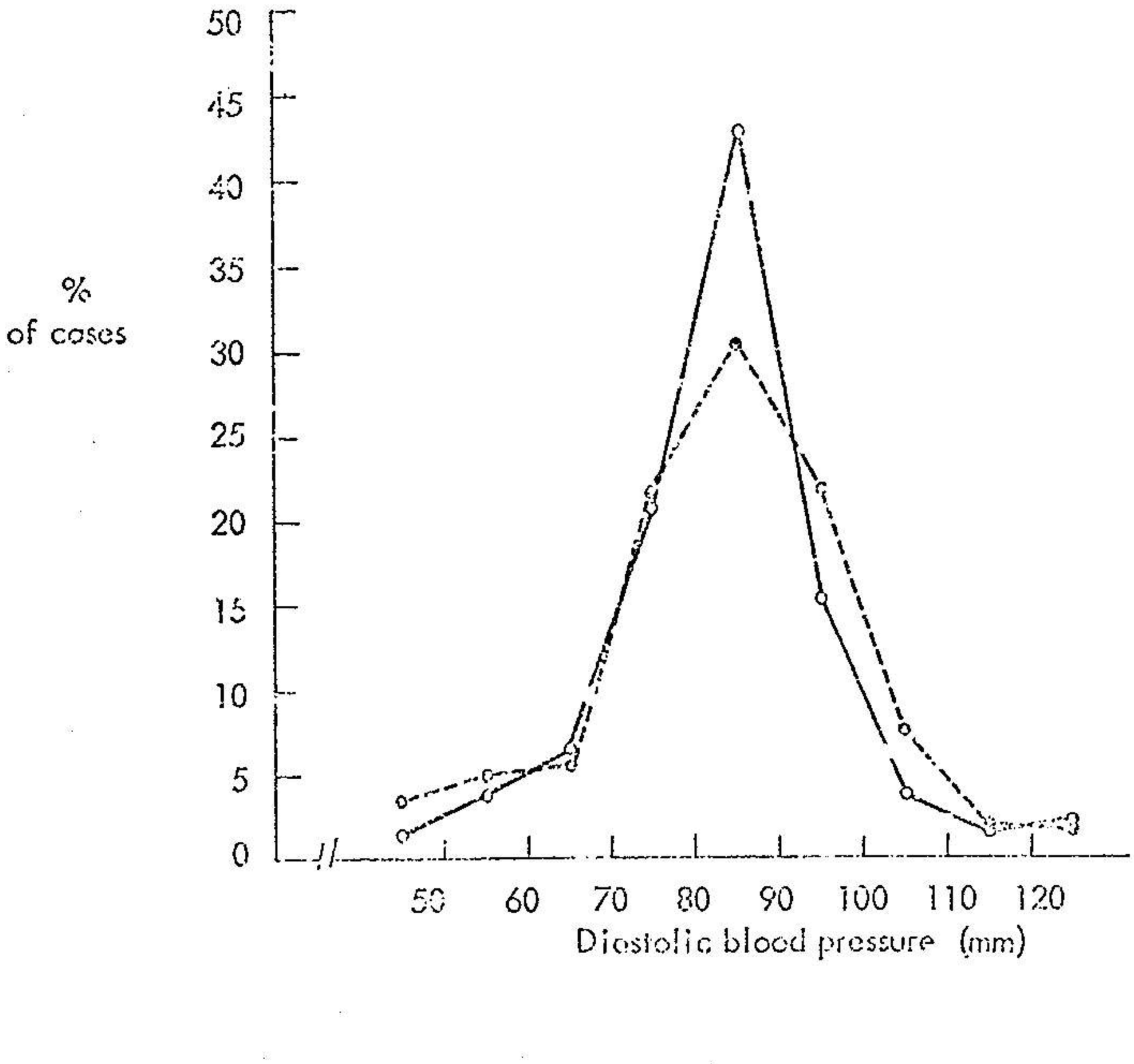
Table 3. Provalence of Hyperienstion by age and sex, Medical Survey Qashqai Tribe, 1973

Sex	Age group	Normotensive No.	%	Borderline No.	%	Hypertensive No.	%	No. Examined
Male	35-44	143	89.9	12	7.5	4	2.6	159
	45-54	79	87.8	4	7.8	4	4.4	90
	55-64	55	76.4	10	13.9	7	9.7	72
	65+	30	54.5	16	29.1	9	16.4	55
	Total	307	81.6	45	12.0	24	6.4	376
Female	35-44	101	85.6	13	11.0	4	3.4	118
	45-54	102	72.3	26	18.4	13	9.2	141
	55-64	32	53.3	15	25.0	13	21.7	60
	65+	27	57.4	10	21.3	10	21.3	47
	Total	262	71.6	64	17.5	40	10.9	366
Total		569	76.7	109	14.7	64	8.6	742

Fig 1

DISTRIBUTION OF SYSTOLIC BLOOD PRESSURE
SAMPLE POPULATION, QASHQAI TRIBE, 1973




50
45
40
35
30
25
20
15
10
5
0
%
of cases
50
60
70
80
90
100
110
120
Diastolic blood pressure (mm)

SUMMARY

On the basis cross sectional health and morbidity survey was conducted in 1973, an attempt was made to measure the prevalence of high blood pressure among Qashqai Tribe. Our study showed that hypertension is by no means a rare condition among nomads and it tends to be a little higher in women than in men age group 35 years and over. Our figures showed that the pattern of increase of prevalence of high blood pressure with the increase of age.

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