

Abstracts of Outstanding Presentation of the 80th Annual Meeting of the Medical Association of Nippon Medical School

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Abstracts of Outstanding Presentation (1)

Relationship between Keloid and Hypertension

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Purpose

We have found that many cases of severe keloid are associated with hypertension. Thus, we studied the relationship between keloid and hypertension statistically. To our knowledge, this is the first large study to find a relationship between keloid and hypertension.

Materials and Methods

Patients with keloid who were treated with surgery at our hospital from January through October in 2011 were examined for the presence of hypertension. The relationship between hypertension and the number or size of keloids was studied statistically. We defined hypertension as a blood pressure of 130/85 mm Hg or greater, regardless of treatment with medication.

Results

The total number of patients was 100. They were 13 to 73 years old, and included 40 males and 60 females. Of the 100 patients, 30 had 3 or more keloids, and 70 had fewer than 3 keloids. Of these patients, 6 and 3, respectively, also had hypertension ($p < 0.05$) (**Table 1**). Thirty-six patients had keloids 10 cm² or larger, and 64

Table 1 Presence of hypertension between 3 or more keloids vs fewer than 3 keloids

	≥3 keloids	<3 keloids
Hypertension (+)	6	3
Hypertension (-)	24	67
P-value	0.01989	

Table 2 Presence of hypertension between keloids
10 cm² or larger vs keloids smaller than
10 cm²

	≥ 10 cm ²	<10 cm ²
Hypertension (+)	7	2
Hypertension (-)	29	62
P-value	0.00991	

Table 3 Presence of hypertension between keloids
40 cm² or larger vs keloids smaller than
40 cm²

	≥ 40 cm ²	<40 cm ²
Hypertension (+)	5	4
Hypertension (-)	11	80
P-value	0.00485	

had keloids smaller than 10 cm². Among these patients, 7 and 2, respectively, had hypertension (p<0.01) (**Table 2**). Moreover, 16 patients had keloids 40 cm² or larger, and 84 had keloids smaller than 40 cm². Among these patients, 5 and 4, respectively, had hypertension (p<0.01) (**Table 3**).

Discussion/Conclusion

We statistically investigated the relationship between exacerbation of keloids and hypertension. Our findings raise the possibility that 1) hypertension can adversely affect keloid tissues physiologically, such as elevating tissue pressure and inducing capillary growth, and 2) keloids and hypertension share a developmental mechanism. In the future, we should examine the possibility that treatment for hypertension is related to the improvement of keloids.