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Plantar pressure distribution among asymptomatic individuals: a cross-sectional study.

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Abstract

PURPOSE:

The purpose of the study was to establish normative data on pressure distribution under the feet (plantar pressure) in standing using a free-mapping device and to find out the association of arch type to that of the plantar pressures.

METHODS:

A cross-sectional study was carried out among 628 participants aged between 6 and 81 years with no known foot problems or other ailments such as type 2 diabetes or neuropathy, which are known to have an impact on plantar pressures. Plantar pressure measurements were quantitatively recorded using a baropodometric platform (i-Step).

RESULTS:

In both males and females of the specified age-group, metatarsal heads were overloaded in terms of magnitude. Increased overload noted in the static plantar pressure measurement is associated with type of the foot arch and gender. A statistically significant relationship between the pressures of left and right feet, pressures under 2 different areas of foot (forefoot and heel), and the average pressures of both feet was also observed.

CONCLUSION:

These data could be used to establish age-based normative plantar pressures in the Indian population and provide a basis to assess feet with planus and cavus deformities.

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