AUGUST IOTADERMA (#306)

Do you know where, and how, you might encounter a "delta wing" in dermatology?

Robert I. Rudolph, MD, FACP

Answer will appear in the *JAAD* Online section of the September issue of the Journal.

JULY IOTADERMA (#305)

Question: Most dermatologists know about the harmless entity of piezogenic pedal papules [fat protrusions detected on the transgredal area of the feet when a person is standing upright]. On the other hand, do you happen to know what piezo1 and piezo2 are, where they are located in the skin, and with what sort of basic process they are involved?

Answer: Piezo1 and piezo2 are large complex ion channel stretch-gated molecules which have been found to act as mechanosensitive channels in mammalian cells.[1-3] They are propeller-shaped proteins which facilitate light touch via mechanotransduction (the transformation of mechanical energy into neural electrical signals). These proteins function in the skin's specialized sensory organs such Merkel cells (which are slowly adapting) and Meissner corpuscles (which are rapidly adapting) low-threshold cutaneous mechanoreceptors and help mediate fine and discriminative touch. They are not utilized in vibration or hard touch. These two molecules are also detected in the axons of Meissner's corpuscles, but not in the internal lamellar cells. Other cutaneous mechanoreceptors such as the Pacinian or Ruffini's corpuscles seem to be devoid of any detectable immunoreactivity. Interestingly, piezo2 was also observed in non-nerve tissues such as basal keratinocytes, endothelial cells, and sweat glands.

REFERENCES

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