

THINK before living donor transplantation

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Living donor kidney donation is increasingly common, and now accounts for almost 35% of all kidney donation in the UK. We report a case of a 51 year old live altruistic female kidney donor who was found to have a 1 cm dark brown/black lymph node at the renal hilum during nephrectomy (Figure 1A). This was not detected by routine pre-donation imaging. Transplantation had to be delayed while frozen sections of the lymph node were analysed. Histology showed macrophages laden with black pigment, but no other abnormal features (Figure 1B-C). This was subsequently correlated with a recent tattoo on the donor's back (Figure 1D) allowing the renal transplant to proceed uneventfully.

Tattoo creation involves the deposition of elemental constituents of pigments, including carbon and titanium, under the surface of the skin. Tattooing is becoming increasingly popular, especially in women, with an estimated 30% of people in Western countries having a tattoo and adults under the age of 40 making up the largest proportion of tattooed individuals. Tattoo pigment migration has previously been reported, with pigment particles found within the cytoplasm of keratinocytes, macrophages and fibroblasts, migrating to corresponding lymph nodes. Pigment deposition has been reported to lead to macroscopic discolouration and enlargement of lymph nodes, occurring as early as 3 days in animal models, and 5 months following tattooing in patients. Rarely, these pigmented lymph nodes have been detected radiologically, while others are found after clinical examination or during surgical intervention. Differentiation between malignant and non-malignant pathology is not possible macroscopically, thus dissection and pathological evaluation is necessary. To date, lymph node pigmentation has been reported in axillary, cervical, paratracheal and mediastinal lymph node groups, but not in renal draining lymph nodes and has not previously been described as contributing to delayed transplantation.

Figure 1 Renal lymph node A) macroscopic view showing significant brown/black pigmentation and microscopic view B) at x50 and C) at x200; D) the patient's tattoo on the upper and middle of her back

