Pain psychology for the non-psychologist

Editor—We read with interest Eccleston and colleagues’1 review of psychological approaches to chronic pain management and would like to share some observations on psychology for the non-psychologist. Chronic pain sufferers often have multiple unrewarding medical consultations before referral to a pain clinic.2 Eccleston and colleagues state that patients may appear obsessed with their pain, equally though patients focus on the expectation that they can be cured.3 These unrealistic expectations can be detrimental to the patient. Calman4 hypothesized that the larger the gap between a patient’s experiences and their hopes and expectations, the poorer their quality of life.

Improving a patient’s experience of life through reduced pain and disability is often the primary focus of pain medicine, but clearly patient expectations play a role in the success of treatment. A 50% reduction in pain levels may be seen as a treatment success by some patients but a failure by others.5 Furthermore, if ‘the most likely outcome of any treatment is failure’ then to improve quality of life, we must narrow this gap by realigning patient expectations. This does not mean creating a pretreatment expectancy that pharmacotherapy or cognitive behavioural therapy will fail. Nor should it remove hope; it would seem patients need some degree of gap to give them something to aspire to.6 Realigning expectations should create realistic and achievable targets for the patient. Even if we cannot successfully cure a patient’s pain, an appropriately managed pain consultation has the potential to improve a patient’s quality of life through challenging ideas and creating realistic expectations.

Declaration of interest

None declared.

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Inflammatory response, immunosuppression, and cancer recurrence after perioperative blood transfusion

Editor—We read with interest the paper of Cata and colleagues1 concerning perioperative blood transfusions, inflammatory response, and immunosuppression. In this interesting review, the authors discuss the understanding of the mechanisms by which transfusion affects immune function and could affect cancer progression. The authors conclude that transfusion of allogenic blood causes substantial alterations to the anti-/pro-inflammatory milieu in the recipient that seems to be proportional to the stored age of the blood products.2 It seems that biological factors included in these packed red blood cells that affect the innate immune function, rather than leucocytes or soluble fractions, may be responsible for tumour-promoting effects.1,2

Arginase has gained importance due to the fact that NO synthases are dependent on the availability of l-arginine in the extracellular environment. L-arginine is metabolized by NO synthase (NOS) to produce nitric oxide (NO) or by arginase to produce urea and ornithine, which is a precursor of polyamines, which are important during cellular proliferation. Expression of NOSs and arginases could co-regulate each other. Depletion of l-arginine by macrophages has been postulated as one of the several mechanisms that causes a decrease in CD3-zeta chain expression in cancer. In a tumour microenvironment, macrophages deplete arginine via their high arginase activity and profoundly down-regulate the tumour-infiltrating T-cells. L-arginine deficiency caused by high arginase activity, both at the tumour site and in circulating blood, has been associated not only with sustained tumour growth via polyamine synthesis but also with tumour escape from immune response. Although arginase has a short half-life of only a few hours in human blood, it might act in early stages of immunosuppression. High levels of free arginase after blood transfusion could underlie many of the deleterious outcomes, including immunosuppression and infection-related processes associated with transfusion of blood stored for long periods.

The proposed detrimental effects of prolonged blood storage have been attributed in part to haemolysis of packed erythrocytes stored for a prolonged period, which leads to an increased oxyhaemoglobin concentration and NO scavenging. Indeed, the haemoglobin level in the storage bag supernatant was found to be higher after 40 days of storage than after...