

Study on Whitecoat effect on Anxiety

Monday, 08 December 2008

Background The white coat effect (defined as the difference between blood pressure [BP] measurements taken at the physician's office and those taken outside the office) is an important determinant of misdiagnosis of hypertension, but little is known about the mechanisms underlying this phenomenon. We tested the hypothesis that the white coat effect may be a conditioned response as opposed to a manifestation of general anxiety.

Methods A total of 238 patients in a hypertension clinic wore ambulatory blood pressure monitors on 3 separate days 1 month apart. At each clinic visit, BP readings were manually triggered in the waiting area and the examination room (in the presence and absence of the physician) and were compared with the mercury sphygmomanometer readings taken by the physician in the examination room. Patients completed trait and state anxiety measures before and after each BP assessment.

Results A total of 35% of the sample was normotensive, and 9%, 37%, and 19% had white coat, sustained, and masked hypertension, respectively. The diagnostic category was associated with the state anxiety measure ($F_{3,237} = 6.4$, $P < .001$) but not with the trait anxiety measure. Patients with white coat hypertension had significantly higher state anxiety scores ($t = 2.67$, $P < .01$), with the greatest difference reported during the physician measurement. The same pattern was observed for BP changes, which generally paralleled the changes in state anxiety ($t = 4.86$, $P < .002$ for systolic BP; $t = 3.51$, $P < .002$ for diastolic BP).

Conclusions These findings support our hypothesis that the white coat effect is a conditioned response. The BP measurements taken by physicians appear to exacerbate the white coat effect more than other means. This problem could be addressed with uniform use of automated BP devices in office settings.

Read Study here: <http://archinte.ama-assn.org/cgi/content/short/168/22/2459>

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