\textbf{125I-iodamazin binding shows stress- and/or diazepam-induced reductions in mouse brain: Supporting data for \textsuperscript{131}I-iodamazin SPECT study of anxiety disorders}

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Effects of repeated swim stress on the binding of \textsuperscript{125}I-iodamazin were examined in the brains of diazepam-treated and non-treated mice. The mice were orally administered diazepam or vehicle (0.5% ethylene glycol) and subjected to daily swim stress (at 20°C for 10 min) for seven consecutive days. The distribution and the amount of \textsuperscript{125}I-iodamazin binding were analyzed autoradiographically after \textit{in vivo} and \textit{in vitro} binding experiments. Repeated swim stress decreased the \textit{in vivo} binding in the hippocampus (p<0.05) and cerebral cortex (p<0.05) of vehicle-treated mice but caused no significant changes in diazepam-treated mice. Subchronic treatment with diazepam decreased the \textit{in vivo} binding approximately 50% in all brain regions examined (p<0.01). The \textit{in vitro} experiment, however, revealed no significant changes except in the hippocampus, where a small but significant decrease in the binding was observed after subchronic treatment with diazepam (p<0.01). The stress- or diazepam-induced reductions seem to represent alterations in the \textit{in vivo} environment related to \textsuperscript{131}I-iodamazin binding. These results suggest that we can investigate the pathophysiology of stress and anxiety with \textsuperscript{125}I-iodamazin SPECT. Care must be taken concerning the effects of benzodiazepines.

\textbf{Key words:} iodine-125-iodamazin; benzodiazepine receptor; repeated swim stress; diazepam; autoradiography