DSIPの抗侵害作用の作用機序
2．延髄－脊髄下行性抑制系の関与について

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THE MECHANISM OF ANTINOCICEPTIVE EFFECTS OF DSIP II: INVOLVEMENT OF BULBOSPINAL INHIBITORY SYSTEM

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ABSTRACT In this paper, we have tried to confirm the mechanism of action of DSIP antinociception. DSIP produces antinociceptive effects via a release of Met－enkephalin. This effect has regional specificity. Kyotorphin, although it releases Met－enkephalin like DSIP, produces an antinociceptive effect after microinjection into the morphine－sensitive brain sites, such as the NRGC, NRPG, PAG and spinal cord. However, DSIP produces antinociceptive effect only in the NRGC／NRPG. Moreover, DSIP involves only the bulbospinal descending inhibitory noradrenergic system to produce antinociception, although opioids such as morphine and kyotorphin elicit effects of both the noradrenegic and serotonergic systems. These data are summarized in Fig.5. Although the present experiments are performed in limited brain sites, antinociceptive effects of DSIP involve the release of Met－enkephalin and the activation of the bulbospinal descending inhibitory noradrenergic system are undeniable. We expect to resolve the mechanism of sleep with these mechanisms of action of DSIP. Further studies concerning DSIP－induced changes in the monoaminergic systems in the forebrain are still under progressive investigation in our laboratory.

抄録 DSIPは中枢Met－Enkephalin含有神経に作用し，その終末からMet－Enkを遊離させることを介して，Naloxone拮抗性を持つ抗侵害作用を発現させる。この結果は，DSIPが，モルヒネ等のオピオイド系薬物と同じ作用機序を持ち，これらの薬物の鎮痛作用の主力を成す，下行性抑制系（Noradorenaline系およびSerotonin系）を活性化させることが考

えられた。しかし，本研究において，DSIP は下行性抑制系の内，Noradorenaline 系のみを活性化させることが明らかとなった。この結果は，DSIP が非選択的に Met－Enk を遊離するのではなく，特異的部位においてのみ Met－Enk を遊離させる作用を持つことを示しており，DSIP の特異的レセプターの存在を強く示唆するものである。