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## Chronological of functional activity during performance of the Iowa gambling Task

이재준<sup>1</sup>, 송희진<sup>1</sup>, 박지애<sup>1</sup>, 김인성<sup>1</sup>, 장용민<sup>1,2,3\*</sup>

<sup>1</sup>경북대학교 의용생체공학과, <sup>2</sup> 경북대학교 의학과,

<sup>3</sup>경북대학교병원 영상의학과

**Purpose :** The aim of this study is to assess the neural activity of consecutive five blocks(20 trials) in the course of the Iowa Gambling Task (IGT).

**Subject and Methods :** Fourteen healthy, right-handed subjects whose doesn't have any psychiatric, neurologic, or medical disease are participated in this study. (3 women,11men; average , 24-42 years) in this study. Oxygen level in blood depend on the contrast made by each subject using a 3.0T GE VHi scanner. The raw fMRI data over the IGT were divided into five phases (20 trial each) and the activation for each blocks were analyzed by testing the BOLD differences between the active and the control task using SPM2.

**Results :** Our result clearly demonstrated that the neural activity in medial prefrontal cortex(mPFC) including anterior cingulate cortex(ACC) moves gradually from dorsal sector of mPFC to ventral sector of ACC over the course of the IGT.

**Conclusion :** These findings are consistent with recent evidence of neuroimaging studies and the cognitive division of mPFC including dorsal portion of ACC plays major role in ambiguous decision-making and the risky decision-making which was associated with significant activities within ventral aspect of ACC.