

A Rapid Development of BPA in Korea

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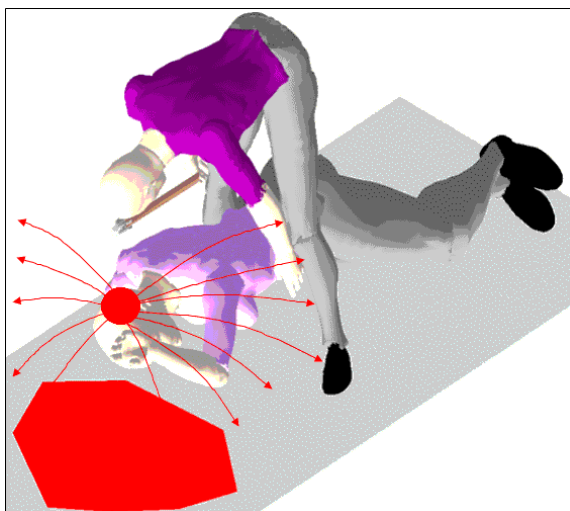
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In 2005, Yong-Seok Choi, the former chief of scientific investigation section of Daegu Metrocity Police Agency in Korea, went to the U.S. and Canada to receive the BPA and CSR courses. Since then, Ross Gardner in 2006, Tom Bevel in 2008, Pat Laturnus and Jim Killeen in 2009, have taught BPA in Korea, and Korea has made remarkable progress in BPA.

As well as Korean police, forensic scientists in the National Forensic Service (NFS), the exclusive crime lab of the Korean government, have been interested in BPA as they do autopsy, biological analysis or physical analysis. In 2008, the Korean Association of Bloodstain Pattern Analysts (KABPA) was established and the Korean Police and NFS collaborated with each other and developed a breakthrough by analyzing various bloodshed events together.

In 2010, BPA played a key role in the courts dealing with the murder case, and the terms translated by the Korean version of the BPA terminology were officially used. In 2011, the Working Group on BPA for the establishment of interagency standard guidelines was launched. In addition, NFS and National Police Agency jointly conducted an experiment of the measurement of the velocity blood droplets and the terminal velocity of blood droplets. In 2012, NFS and National Police Agency jointly conducted an experiment of the measure of the error rate of the straight line method of the impact spatterS.



(Elderly murder scene which BPA is the key to the court) (Scene reconstruction by BPA)



(Working Group meeting on BPA)



(An experiment on velocity measurement of the impact spatters by a hammer (2011))



(An experiment on the measurement of the terminal velocity of blood droplets (2011))



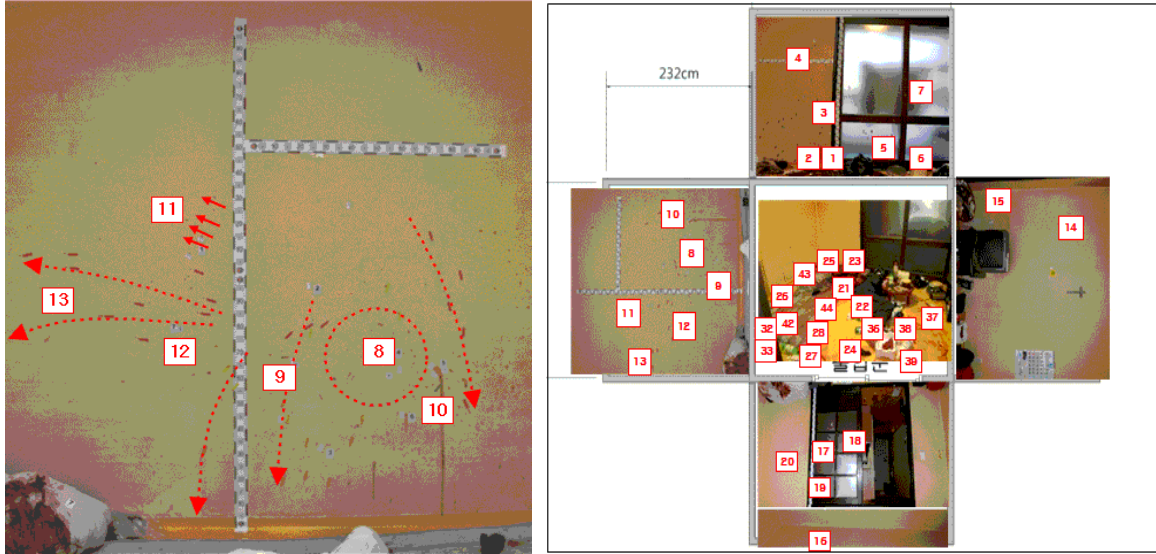
(An experiment of the measure of the error rate of the straight line method of the impact spatter (2012))

Police crime scene analysts and forensic scientists in Korea have participated in the IABPA in order to exchange information with overseas experts. They presented the results of research on the velocity measurement of scattered blood in 2011, and on the error rate analysis results in 2012.



(Presentation of research results at IABPA (2011, 2012))

As BPA was applied to the blood murder case in Korea, the case analyzed by BPA was solved or BPA contributed greatly to solve the case. In 2012, crime scene analysts and forensic scientists resolved the incident by analyzing the perpetrator through crime scene reconstruction and bloody clothing analysis for Daejeon apartment homicide.

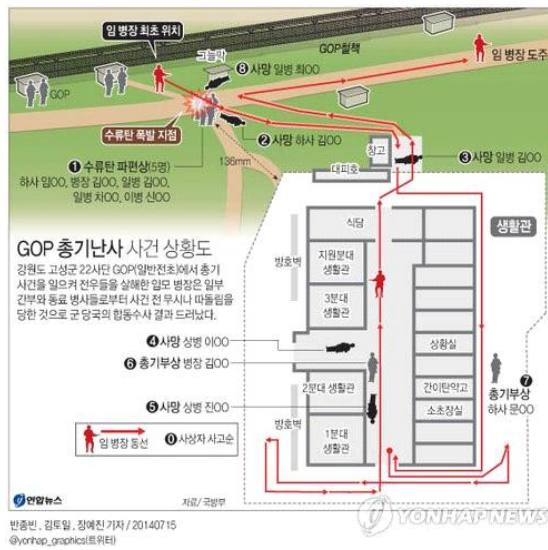


(Distribution of bloodstains and blood groups)

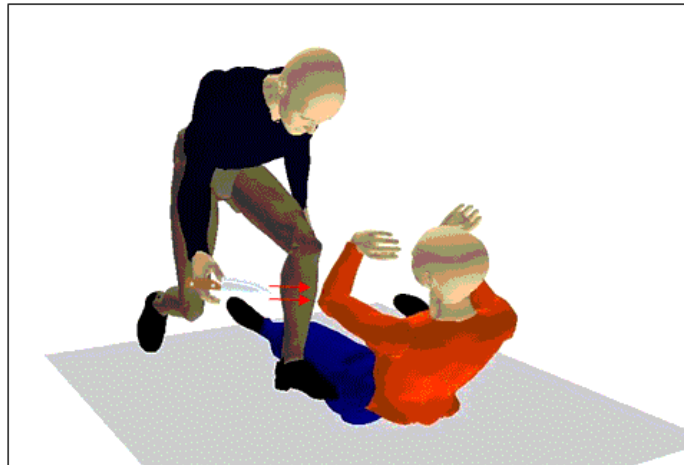
In 2014, Yeongdong traffic accident murder case was resolved by reconstructing the crime scene and we reconstructed the gun shooting scene at the Goseong GOP and estimated the shot attitude. In 2016, the crime scene was reconstructed by analyzing the bloodstain patterns of the murder of the mistress of a Pub and the case was solved by identifying the perpetrator by analyzing bloodstain patterns of the clothing.



(Vehicle murder scene and under vehicle condition (2014))



(GOP gunfire Incident route and victim attitude (2014))



(A scene of the mistress murder of a Pub and act expression (2016))

NFS is currently studying the basis of fluid mechanics theory for BPA. At the end of this study, we will be able to fluid mechanically explain the practical techniques and principles of BPA, and we expect that BPA, a field of forensic science, will have higher scientific reliability. In addition, an improvement study on the impact angle formula of the spatters which McDonnell established has been carried out. Based on the result of this study, a smartphone application which can easily calculate the impact angle of the spatters will be developed soon.

This year, KABPA was celebrated its 10th anniversary. Police, forensic scientists, and university professors will gather and discuss the development of BPA in the KABPA Conference at the Kangwon National University on June 29.