The Two-Point Technique of Fluoroscopy during the Urological Procedure: Is Really Necessary?

Seyed Mohammad Kazem Aghamir1, Alimohammad Fakhr Yasseri1*

1Urology Research Center, Tehran University of Medical Sciences, Tehran, Iran

ABSTRACT

Nowadays the common use of diagnostic and therapeutic ionizing radiation increases worries about excessive occupational and patient exposure. The novel fluoroscopic-guided endoscopic procedures can diminish radiation dose during urologic procedures. A “two-point technique (TPT)” is defined in which the fluoroscope image intensifier (c-arm) is shifted among caudal and cephalad set points of the operative field. Maybe patient radiation exposure is less with TPT than with a non-structured conventional technique, stated as the cognitive fluoroscopic technique (CFT). As we could see the urethral lumen clearly by Ureteroscope and endoscopic visions, we use rarely x-ray during our routine procedures in our center, except for percutaneous nephrolithotripsy.

Keywords: Fluoroscopy; Urological Procedure; Urology

Editorial: There is a debate over the two-point technique for fluoroscopic-guided endoscopic procedures, two-point technique (TPT), in urology as was mentioned in research by Wagmaister and his colleagues (1). They conducted a validation study by introducing new technique to reduce radiation dose and fluoroscopic time during endoscopic urological procedures. The TPT is explained in the article for Fluoroscopic-Guided Endoscopic Procedures, which the fluoroscope image is shifted between caudal and cephalad points of the operative field. TPT technique could successfully shorten the mean fluoroscopy time from approximately 104 to 71 seconds and the mean radiation dose from around 20 mGy to 11 mGy and this is wrathful for not the only surgical team, but the patient as well.
exposure?
When it comes to endourological procedures, we believe that we could use less radiation in our procedures. Diagnostic ureteroscopy could be finely done by the guidewire and with slimmer ureteroscopes. In cases with severe stricture hydrophilic guidewires could help the urologist. And for the last solution, we can leave a double J stent for few weeks for passive dilatation. This strategy could be safer for both surgeon and the patient. Considering the ALARA principle (as low as reasonably achievable), that radiation doses should be kept as low as reasonably achievable, social and economic factors being taken into account, is well known to medical physicists. It is perhaps less well known that the ALARA principle applies to medical exposures as well as to other sources of radiation exposure (3).

Conclusions
Although this technique helps reduce radiation exposure to the urologist and surgical team, a urologist should try to use less radiation through fluoroscopy during routine urologic procedures. As we could see the urethral lumen clearly by Ureteroscope and endoscopic visions, we use rarely x-ray during our routine procedures in our center, except for percutaneous nephrolithotripsy.

Authors’ contributions
SMKA is mainly designed and suggest the main idea of the manuscript, AFY wrote the manuscript and SMKA edited it.

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Abbreviations
ALARA As low as reasonably achievable
DJ Double-J
TPT Two-point technique

References