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Google Translate: Can It Be a Solution for Language Barrier in Neuraxial Anaesthesia?

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Neuraxial anaesthesia, which is the method of choice for caesarean section, requires adequate communication between the patient and the anaesthesiologist in the perioperative period. This may become a cause for concern in patients with language barriers. In such cases, clinicians either avoid neuraxial anaesthesia or try 'getting by', which in essence means using gestures, mimics and limited key words to communicate in the absence of a live professional interpreter (1, 2). In this report, we shared our experience with a Moroccan patient undergoing spinal anaesthesia for caesarean section, for whom we used the voice translation property of the Google Translate application (GT) to overcome the language barrier using a mobile phone.

A 29-year-old patient who could only speak Arabic presented for urgent caesarean section. At first, we communicated with the patient with the help of a relative who could speak both Turkish and Arabic. When the patient expressed a desire for neuraxial anaesthesia, we used GT to inform her about the procedure and obtain her consent. The accuracy of the translations was confirmed by her relative in the preoperative ward.

During the operation, we communicated with the patient using GT. Translated sentences regarding the spinal anaesthesia procedure included the explanation of positioning, information and instruction about particular steps (e.g., needle entry, the request to stay motionless), questioning for block level, announcing surgical steps (e.g., start of the surgery, birth), bonding of the newborn together with the mother and questions regarding pain or any discomfort experienced intra- and postoperatively.

Google Translate application has enhanced its accuracy recently because of a change from a 'rule-based algorithm' to machine learning. The old approach dictated that programmers first wrote rules of both target and source languages. The translated sentence was then broken down into an 'abstract' interlanguage followed by a rebuilding according to target language rules. However, in machine learning, the software, which is given a big repository of translated words, finds patterns (recognition) and uses these patterns to predict translations that have not been introduced to it before (learning).

In practice, voice-to-text translation of a Turkish sentence, the control of the text on the phone screen and the translation of the Turkish text to voice in Arabic by pressing on the screen may be seen as a slow process. Although translation was fast in our case, the clinician's reaction in the management of acute complications may be delayed specifically in a crisis. This may be further exacerbated by the use of handwriting, text or smart camera features that recognise signs. In addition, our sentences were reconfirmed by a relative, which may not be possible in all cases. The accuracy of emergency department discharge instructions translation from English to Spanish and Chinese has been found to be 92% and 81%, respectively (3). Another problem is the possibility of unidirectional communication and medicolegal issues introduced in the absence of a live interpreter. Yet, this free application offers a better solution than simply 'getting by', especially in countries where physicians are frequently encountering patients with language barriers.

This case was presented at the annual 53rd congress of Turkish Society of Anaesthesiology and Reanimation in 2019 as e-poster.

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References

1. Panayiotou A, Gardner A, Williams S, et al. Language translation apps in health care settings: Expert opinion. JMIR mHealth uHealth 2019; 7: e11316. [Crossref]
2. Freyne J, Bradford D, Pocock C, Silvera-Tawil D, Harrap K, Brinkmann S. Developing digital facilitation of assessments in the absence of an interpreter: Participatory design and feasibility evaluation with allied health groups. JMIR Form Res 2018; 2: e1. [Crossref]
3. Khoong EC, Steinbrook E, Brown C, Fernandez A. Assessing the use of google translate for spanish and chinese translations of emergency department discharge Instructions. JAMA Intern Med 2019; 79: 580-2. [Crossref]