Report on Advances for General Medicine in 2019: Neurosurgery, Urology, Gynecology and Obstetrics, and Internal Medicine

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This review reports notable advances in general medicine that have been published in 2019. It highlights the progress in neurosurgery, urology, gynecology and obstetrics, and internal medicine. Promising outcomes in prevention and treatment are reported. I think that advances realized in 2019 will inspire new studies.

Neurosurgery

The use of graft materials in dural defects (cranial or spinal) are still a problem for neurosurgeons because they may lead to some serious complications such as meningoneural adhesions, scar tissue, pachymeningitis or soft tissue infections, the leakage of cerebrospinal fluid, neural herniations, and tethered cord syndrome [1]. Although most graft materials have been implicated in the cranial region, there are a few studies regarding spinal duraplasty [2]. One paper published in the Eurasian Journal of Medicine drew attention to an aspect that has not been studied in depth. That experimental and controlled study conducted by Calikoglu et al. investigated the effectiveness of collagen matrix in spinal duraplasty in terms of cellular inflammatory response, fibroblastic proliferation, foreign body reaction, and capsule formation. They showed that the collagen sponge might be suitable for spinal duraplasty and might be a useful agent in patients whose dura cannot be closed primarily because of retraction, shrinkage, or excision [2]. Therefore, further clinical studies are necessary to investigate the effects of collagen matrix in human beings.

Urology

Partial nephrectomy in localized kidney cancer has replaced radical nephrectomy because of similar oncologic outcomes and better preservation of renal function [3-5]. Laparoscopic partial nephrectomy (LPN) has been the most preferred method because of advancement of laparoscopic surgery in recent years [5]. It may cause some complications such as hemorrhage, urine leakage, and renal functional deterioration [6]. Although various hemostatic agents throughout LPN have been used, their superiority relative to each other has not been studied yet. One article published by Aykan et al. shed light on this issue, and the effects on estimated blood loss, surgical parameters, and early renal functional outcomes of hemostatic agents including Spongostan, Surgicel, and Floseal in 129 LPN were investigated [7]. They found that three agents had no substantial difference on surgical parameters and early renal functional outcomes, but Floseal provided significantly lesser estimated blood loss.

Gynecology and Obstetrics

Cesarean delivery (CD) is the most frequent abdominal surgery worldwide [8], and pain is the most common complication of it [9]. The pain may be associated with worrying about surgical injuries, avoiding mobilization, and disrupting of the mother-infant bonding [10]. One of the most promising non-pharmacological pain interventions is postoperative abdominal binder usage. However, the effect of abdominal binder on mobilization in women who underwent CD has not been investigated. Karaca et al. [11] conducted a randomized and controlled study including 44 controls and 45 women who underwent CD. They found that the walking distance in the study group was greater than that in the control group, and the pain score and Symptom Distress Scale in the study were lower than those in the control group.

Internal Medicine

Some cancer types, including colon, endometrium, postmenopausal breast, kidney, esophagus, pancreas, gallbladder, liver, and bone marrow, are associated with obesity [12]. Insulin resistance and hyperinsulinism resulting from obesity can cause a reduction in insulin-binding protein 1 levels and conversely an increase in the levels of insulin-like growth factors, which promotes cell proliferation and inhibits cell apoptosis. Additionally, obesity can alter the secretion of adipokines (resistin, leptin, adiponectin, ghrelin, and proinflammatory cytokines such as interleukin-6 and tumor necrosis factor-α) produced by adipose tissue [13]. One review written by Uyar et al. examines the relationship between obesity and cancer [13]. This review fills the gap in this field.

In conclusion, last year, the studies have made a great progress in prevention and treatment of diseases and have revealed different beneficial approaches. However, there are still some limitations. Therefore, further studies are needed.

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