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Review and commentary of key non-JVS articles

Physical Distancing, Face Masks, and Eye Protection to Prevent Person-to-Person Transmission of SARS-CoV-2 and COVID-19: A Systematic Review and Meta-Analysis



Chu DK, Duda S, Solo K, Yaacoub S, Schunemann H. *Lancet* 2020;395:1973-87.

Study design: Systematic review and meta-analysis of 21 standard World Health Organization-specific and COVID-19-specific sources through May 3, 2020.

Key findings: In a review of 25,697 patients, transmission of viruses was lower with physical distancing of 1 meter or more compared with less than 1 meter. Protection was increased as distance was lengthened (absolute risk, 3% with longer distance vs 13% with shorter distance). Face mask use could result in a large reduction in risk of interaction (adjusted risk, 3% with face masks vs 17% without). There was a stronger association with protection using N95 masks compared with disposable surgical masks or reusable cotton masks. Eye protection also was associated with less infection.

Conclusion: These findings support physical distancing of 1 meter or more. Optimum use of face masks and eye protection in public and health care settings should be informed by these findings.

Commentary: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) causes COVID-19 and is spread person to person through close contact. With no effective pharmacologic interventions or vaccine expected in the near future, reducing the rate of infection (flattening the curve) is a priority. Added benefits are likely with even larger physical distances, such as 2 meters (6 feet, which we keep hearing about) or more. The use of face masks, including N95 and surgical or similar masks (12- to 16-layer cotton or gauze masks), and eye protection is clearly beneficial. For the general public, this report confirms previous recommendations that physical distancing of more than 1 meter is highly effective and that face masks are associated with protection. Other basic measures, such as hand hygiene, are still needed.

I am growing more disheartened by my fellow man (and woman) as things open up during the pandemic. This past weekend, I went to a barbecue outside of Philadelphia, which was attended by many physicians, and to my older brother's outdoor 70th birthday party in northern New Jersey, which was especially hard-hit by the virus. At both events, none of the guests wore masks but would sidle up to my wife, my son, and me as if everything were normal. I can think of four reasons that people would not follow recommendations such as maintaining at least 3- to 6-foot distancing and wearing face masks: (1) they *know* they don't have the virus (even without being tested); (2) they *know* they won't get sick because they're young, or they're older but otherwise healthy; (3) they don't believe the science (I don't have patience for these people); or (4) they believe we are all going to get the virus anyway, so get it over with and let's move on (I know very intelligent people who support this last reason). I don't want to tread political waters, but I wish these individuals would acknowledge there may be others who don't agree with this *laissez-faire* reasoning. Some people may want to maintain social distancing at an outdoor event—and maybe even wear a face mask.

Three-Year Sustained Clinical Efficacy of Drug-Coated Balloon Angioplasty in a Real-World Cohort



Torsello G, Stavroulakis C, Brodmann M, Micari A, Tepe G, Veroux P, et al. *J Endovasc Ther* 2020 Jun 25. [Online ahead of print]

Study design: Multicenter, prospective single-arm IN.PACT Global Study from 2012 to 2014

Key findings: There were 1406 patients with claudication (89%) or rest pain (11%) with complex femoropopliteal occlusive lesions who were treated with IN.PACT Admiral drug-coated balloon (DCB) angioplasty (Medtronic, Dublin, Ireland). Mean lesion length was 12 cm, and a third of the lesions were occluded. The Kaplan-Meier estimate of freedom

from clinically driven target lesion revascularization through 36 months was significantly lower in patients with chronic limb-threatening ischemia (68%) compared with claudicants (78%). Predictors of clinically driven target lesion revascularization through 36 months included increased lesion length, reference vessel diameter ≤ 4.5 mm, in-stent restenosis, and chronic limb-threatening ischemia.

Conclusion: DCB angioplasty with the IN.PACT Admiral DCB for femoropopliteal disease to treat complex lesions in a real-world population is associated with sustained clinical efficacy and low rates of reintervention at 3 years after the initial procedure.

Commentary: Paclitaxel reduces the risk of arterial restenosis by activating apoptosis and inhibiting the proliferation and migration of smooth muscle cells. Paclitaxel DCBs to treat femoropopliteal arteries have led to a shift from primary stenting to performing balloon angioplasty alone for many clinicians. Numerous randomized controlled trials have demonstrated a clear benefit of DCBs compared with plain-old balloon angioplasty in terms of improved patency and reduced reintervention and bailout stent rates. Several European position papers state that DCBs are the treatment of choice for both de novo and restenotic TransAtlantic Inter-Society Consensus II A and B femoropopliteal lesions and represent a viable alternative to stents for complex femoropopliteal disease.

Severe calcification may be a marker for poor results of DCBs and increases the risk for flow-limiting dissections after angioplasty. The increased calcium burden may limit the drug uptake in the arterial wall and may decrease the antiproliferative effect of paclitaxel. There may be an added benefit from "vessel preparation" before DCB angioplasty in severely calcified lesions. Some studies have reported increased paclitaxel uptake after orbital or directional atherectomy in calcified femoropopliteal arteries. For this reason, we agree that atherectomy devices may pave the way for improved results with DCBs for densely calcified lesions, but more definitive studies are needed.

The authors did not even mention the controversy about possible worse long-term mortality with paclitaxel-coated balloons. I wonder why.

Abdominal Compartment Syndrome After r-EVAR: A Systematic Review With Meta-Analysis on Incidence and Mortality



Sá P, Oliveira-Pinto J, Mansilha A. *Int Angiol* 2020 Jun 9. [Online ahead of print]

Study design: Search of MEDLINE and Web of Science through October 2019.

Key findings: Treatment of ruptured abdominal aortic aneurysms by endovascular aneurysm repair (r-EVAR) was complicated by abdominal compartment syndrome (ACS) in 9% (252/3064) of patients in 46 studies. In studies that reported mortality rates, 56% (94/169) of patients with ACS died vs 20% (328/1656) of patients without ACS. Decompressive laparotomy was performed in 41 patients and decreased mortality by half.

Conclusion: ACS affects approximately 9% of patients treated by r-EVAR and significantly increases perioperative mortality. Close postoperative surveillance to clinical signs of ACS is vital in these patients.

Commentary: ACS after r-EVAR occurred in almost 10% of patients in this literature review. Others have reported an incidence as high as 20%. Approximately half of patients who develop ACS after rEVAR die. ACS impairs organ perfusion, resulting in multiple organ failure. Vascular surgeons may not think of ACS after r-EVAR until worsening urine output, hypotension, abdominal distention, bowel ischemia, respiratory function, and metabolic acidosis develop. The diagnosis is suggested by these clinical findings and can be confirmed by elevated intra-abdominal pressure. The World Conference on Abdominal Compartment Syndrome in 2006 defined an elevated intra-abdominal pressure >20 mm Hg as being consistent with overt ACS. >25 mm Hg as being associated with extensive bowel necrosis, and >30 mm Hg as a marker of impending cardiovascular collapse.¹ Bladder pressures may be used as a surrogate for intra-abdominal pressures. Current protocols specify inflating a Foley catheter and instilling 25 mL of saline into the aspiration port of a Foley catheter, clamping the tubing distal to the port, and connecting a