

Invited Editorial / Davetli Editöryal Yorum

What are our tactics for acute heart failure according to TAKTIK?

TAKTIK'e göre akut kalp yetersizliğindeki taktiklerimiz nelerdir?

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In this issue of the Archives of the Turkish Society of Cardiology, Dr. Mehmet Eren and colleagues report results of the TAKTIK study, a registry of acute heart failure cases in Turkey.^[1] To the best of my knowledge, this is the first large-scale, nationwide registry for acute heart failure. This registry is reminiscent of several previous national and international registries for acute heart failure, such as the Acute Decompensated Heart Failure National Registry (ADHERE) in the USA^[2] and the EuroHeart Failure Survey II (EHFS II).^[3]

Acute heart failure (or perhaps hospitalization for any decompensated heart failure) is a highly heterogeneous, still poorly understood, and difficult-to-treat picture, especially compared with chronic forms of heart failure. TAKTIK and other registry projects are executed in order to better understand the common problem of heart failure hospitalizations, and given the significant mortality and morbidity of the condition, such registries may have a positive impact on public health.

Strengths of TAKTIK

The Turkish TAKTIK registry for acute heart failure has several strengths. It is a multi-center registry (36 centers) with total sample size of 558 patients, which is reasonable for a single country. Various parameters were obtained for all patients, including detailed baseline characteristics, etiology for heart failure, exacerbating factors, comorbidities, physical examination

findings, previous medication use, in-hospital treatment and discharge medications. Validity and reliability of the data were assessed by investigators for each participating center, and non-compliant centers were excluded from the registry, contributing to the reliability of the present data. Primary results of the registry are comparable to similar previous registries, as nicely summarized by the TAKTIK investigators in their detailed tables.

Abbreviation:

IV Intravenous

Shortcomings of TAKTIK

As outlined by the investigators, all regions of Turkey may not have been represented appropriately in TAKTIK, limiting generalizability of the findings. Included population was probably somewhat low-risk, with mean age of 62 years (with other databases usually having a mean age >70 years) and normal average sodium level (low sodium is a well-known strong negative prognosticator in heart failure). In-hospital death rate was only 3.4% in TAKTIK, the lowest of similar registries. Data were not available for frequency of echocardiographic imaging during index admission, duration of hospital stay, post-discharge follow-up, and re-hospitalization rate, all of which are important parameters in the heart failure world. Also, there appears to be some lack of clarity regarding exact etiology of heart failure. While valvular heart disease is the reported underlying cause in 46% of TAKTIK patients, this is probably mostly driven by functional mitral regurgitation and not by

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primary valve disease. High prevalence of pathological Q waves on electrocardiogram (42%) suggests that ischemic heart disease was main cause of heart failure, as is the case in most other registries.

Thoughts on the results of TAKTIK: Perspective of a heart failure specialist

According to TAKTIK data, nearly all patients hospitalized with acute (or decompensated chronic) heart failure received intravenous (IV) diuretics, mostly as bolus injections, which is standard care. Approximately one-half of patients received IV nitrates during their stay, which is notable, and yet reasonable, according to treatment guidelines.^[4] Surprisingly, 31% received an inotrope, most commonly dobutamine, followed by dopamine and levosimendan, and many received a combination of these. This is a high percentage compared to similar registries, and is somewhat difficult to explain, given lack of solid data supporting routine use of these agents in this setting.

Regarding out-of-hospital management of patients, TAKTIK revealed that after heart failure admission, use of diuretics did not really increase from preadmission (62%) to post-discharge (63%). This is somewhat surprising, since one would expect most patients to need maintenance dose diuretic after an episode of decompensation with hypervolemia. On the other hand, while TAKTIK investigators are worried that both preadmission and postdischarge use of proven neurohormonal antagonists (i.e., renin-angiotensin-aldosterone system and beta-blockade) were somewhat low, I have a different take on this. About one-quarter of patients were admitted without previous history of heart failure, and about 20% of all patients had ejection fraction of >40%. Therefore, about half of the patients were not really eligible for neurohormonal antagonists at time of admission. Consequently, I don't think that 50% angiotensin-converting-enzyme inhibitor use, 46% beta-blocker use, or 40% aldosterone-receptor blocker therapy is worrisome. Importantly, use of all 3 of these classes of agents increased at time of discharge, which is encouraging. Also, it should be remembered that certain contraindications, such as hypotension, kidney failure, hyperkalemia, or ongoing volume overload will prevent many patients from getting these proven therapies. Therefore, expecting a 100% use-rate with these agents is actually not necessary. On the other hand, digoxin use increased from 4% at preadmis-

sion to 33% at time of discharge. This may be reasonable, as about one-third of TAKTIK patients had atrial fibrillation and probably needed heart rate control; however, the remarkable reliance on digoxin in this setting is still noteworthy. On the contrary, oral anticoagulant therapy was prescribed to only 10% of patients at time of discharge, which appears to be too low, given 33% prevalence of atrial fibrillation in this population, when oral anticoagulation would be ordinarily indicated. Antiplatelet therapy use was quite high at 67%, which probably does not have any major benefit to heart failure patients, even when etiology is ischemic cardiomyopathy.^[5]

As a last word, I would like to congratulate Dr. Eren and colleagues for their efforts in creating the TAKTIK registry and describing several important aspects of in-hospital management of heart failure in Turkey. I hope that TAKTIK serves as an inspiration for the generation of similar registries in our country.

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