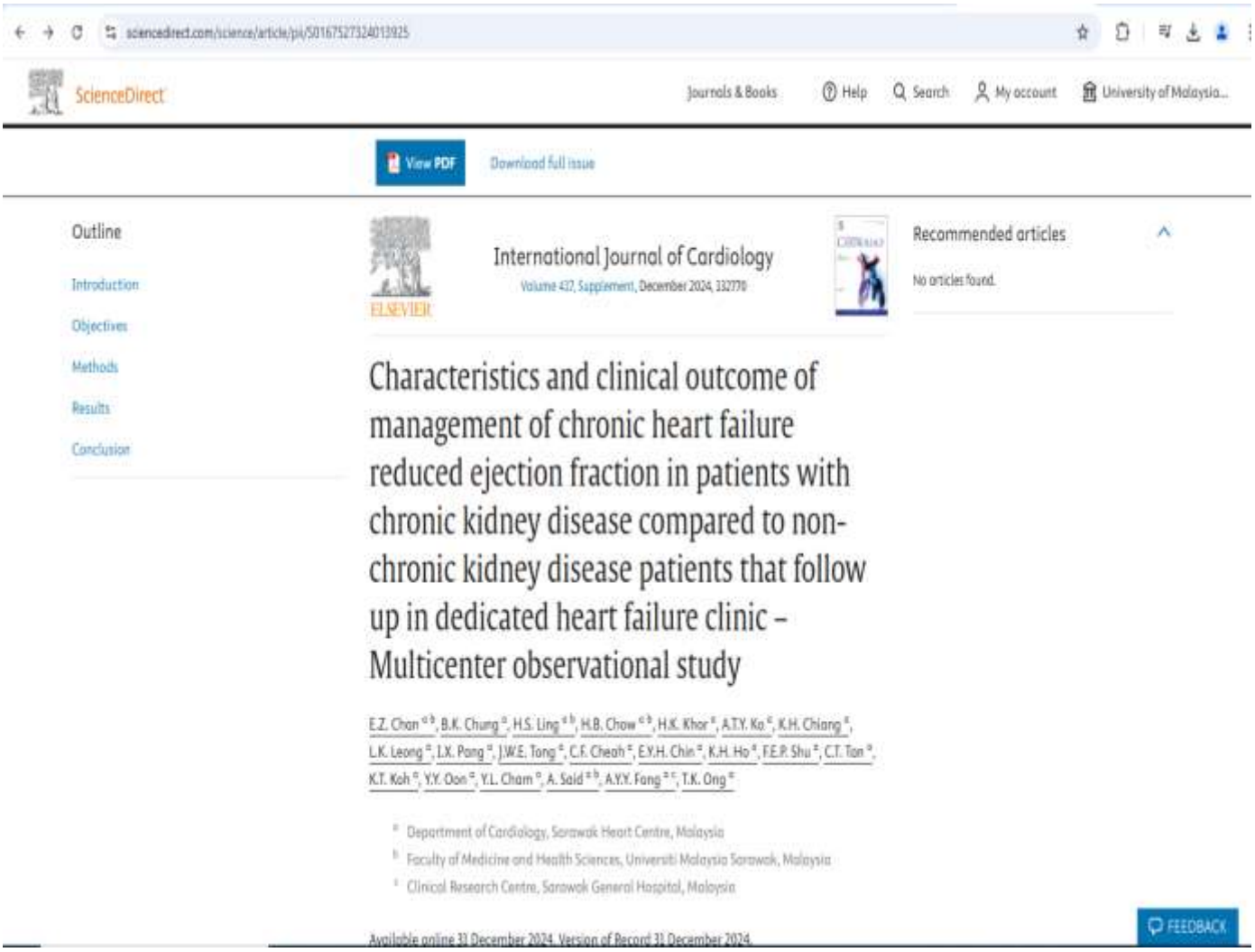
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E.Z. Chan [a,b], B.K. Chung [a], H.S. Ling [a,b], H.B. Chow [a,b], H.K. Khor [a], A.T.Y. Ko [c], K.H. Chiang [a], L.K. Leong [a], I.X. Pang [a], J.W.E. Tong [a], C.F. Cheah [a], E.Y.H. Chin [a], K.H. Ho [a], F.E.P. Shu [a], C.T. Tan [a], K.T. Koh [a], Y.Y. Oon [a], Y.L. Cham [a], A. Said [a,b], A.Y.Y. Fong [a,c], T.K. Ong [a]
[a] Department of Cardiology, Sarawak Heart Centre, Malaysia
[b] Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Malaysia
[c] Clinical Research Centre, Sarawak General Hospital, Malaysia
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FEEDBACK

Characteristics and Clinical Outcome of Management of Chronic Heart Failure Reduced Ejection Fraction in Patients with Chronic Kidney Disease Compared to Non-Chronic Kidney Disease Patients that Follow Up in Dedicated Heart Failure Clinic – Multicenter Observational Study

E.Z. Chan[1,2],B.K. Chung[1], H.S. Ling[1,2], H.B. Chow[1,2], H.K. Khor[1], A.T.Y. Ko[1], KH Chiang[1], L.K. Leong[1], I.X. Pang[1], J.W.E. Tong[1], C.F. Cheah[1], E.Y.H, Chin[1], K.H. Ho[1], F.E.P. Shu[1], C.T. Tan[1], K.T. Koh[1], Y.Y. Oon[1] , Y.L. Cham[1], A. Said[1,2], A.Y.Y. Fong[1,3], T.K. Ong[1],
[1]Department of Cardiology, Sarawak Heart Centre,
[2]Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak,
[3]Clinical Research Centre, Sarawak General Hospital,

Introduction: The presence of chronic kidney disease(CKD) in patients with heart failure (HF) can increase the rates of complications, readmissions and mortality. Patients with CKD can also limit the use of guideline-directed medical therapy(GDMT) for HF in regular clinical practice. The clinical outcome of HF patients with CKD compared to non-CKD in a dedicated HF clinic is unknown.

Objectives: Characteristics and clinical outcome of management of chronic heart failure reduced ejection fraction(HFrEF) in patients with CKD compared to non-CKD patients that follow up in a dedicated HF clinic.

Methods: This observational study in a dedicated HF clinic among ten hospitals in Sarawak involves 340 patients with HFrEF from 1st Jan 2021 to 30th June 2023. Clinical records, baseline, and six-month composite clinical outcomes were analyzed. CKD was diagnosed by reduced estimated glomerular filtration rate (GFR) according to the 2021 CKD-EPI.

Results: In CKD group(n=75,22%) and non-CKD group(n=265,78%), the CKD group, the mean age is older(60.7±13 years vs. 53±13 years, p=0.044); predominant are male(82.7% vs. 75%, p=0.170). CKD patients had higher prevalent in hypertension(77.3% vs. 58% p=0.003), but no different in dyslipidemia(55% vs. 47%, p=0.252), diabetes(45% vs. 33%, p=0.056), ischemic heart disease(45% vs. 42%, p=0.612), and atrial fibrillation(27% vs. 20%, p=0.227).

The prescription of the renin-angiotensin-aldosterone system(RAAS) blockers was significantly lower in the CKD group compared to the non-CKD group at baseline (58% vs 75%, p=0.005) and three months(74% vs 92%, p<0.001). Baseline and three-month prescriptions of beta blockers, mineralocorticoid receptor antagonists, and sodium-glucose cotransporter-2 inhibitors in both groups were no different.

There was no difference in terms of LVEF improvement from baseline to three months in both groups, 26.1±7.4% to 35.5±13.6%(CKD group) vs 25.1±6.9% to 34.2±11.8% (non-CKD group)(p=0.57), and no difference in terms of improvement in NYHA class in both group(p=0.432).

The CKD group had a higher 3-month readmission rate(14.7 percent vs. 7.2%, P=0.043), but there was no difference in 3-month all-cause mortality(1.3% vs. 1.5%, P=0.911).

Conclusion: Both groups show improvement in LVEF and NYHA functional class among patient follow-ups in dedicated HF clinics. The CKD group showed lower RAAS prescriptions and higher 3-month readmission.(345 words)