**Screening for Severe Liver Fibrosis in a T2DM Population: Application of the new GESA recommendations for MAFLD assessment in an Australian Tertiary Hospital Diabetes Centre**

**Background:**

Type 2 diabetes (T2DM) is an independent risk factor for development and progression of Metabolic Dysfunction-Associated Steatohepatitis (MASH) with fibrosis. Clinical guidelines recommend that people with T2DM (pwT2DM) be screened for severe liver fibrosis using non-invasive tests (NITs). The best method for screening pwT2DM is yet to be determined.

**Aims:**

* Describe clinical characteristics of pwT2DM attending the Diabetes and Liver Clinic (DLC).
* Assess utility of NITs in predicting liver fibrosis.
* Evaluate performance of new Gastroenterological Society of Australia (GESA) screening recommendations in this cohort.

**Methods:**

Retrospective audit of pwT2DM referred to DLC with abnormal liver enzymes and/or radiological steatosis was performed. Transient elastography by Fibroscan® was used to assess fibrosis (LSM, kPa) and steatosis (CAP, dB/m). NAFLD Fibrosis Score (NFS), Fibrosis-4 (FIB-4), and Fibroscan®-AST (FAST) were calculated.

**Results:**

Sixty-six patients were reviewed: 35% female, age 54.6±14.2yrs, diabetes duration 11.5±8.3yrs, BMI 32.5±7.7kg/m2, HbA1c 7.7±2.0%. Overall, 16.9% had severe fibrosis (LSM≥10.3kPa), with mean LSM 8.4±7.6kPa and CAP 290±57dB/m. Performance of each NIT is shown:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Sensitivity** | **Specificity** | **NPV** | **PPV** |
| **FIB-4** | 75% | 91% | 97% | 50% |
| **NFS** | 83% | 69% | 95% | 38% |

If stratification using the GESA algorithm was used (FIB-4 as first-line NIT), 24/63 people (38%) would have required a second-line NIT (LSM or direct-serum-test). If a second-line NIT was not available, 30/63 people (48%) would have required Hepatologist referral, whereas with a second-line NIT only 21% would require referral.

FIB-4+FAST would have generated 19 referrals (31%), including all but one of the people identified by FIB-4+LSM, plus 7 additional people.

**Conclusion:**

Severe liver fibrosis is relatively common in pwT2DM, emphasising the need for screening. Both NITs had excellent NPV with low false-negative rates. The GESA screening algorithm performed well in our cohort, but Centres without access to second-line NITs will likely generate larger numbers of Hepatologist referrals for further assessment.