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LETTER TO THE EDITOR

Impact of COVID-19 pandemic on routine antenatal urine iodine screening program in Indochina

COVID-19 pandemisinin Çin Hindi'ndeki rutin doğum öncesi idrar iyot tarama programına etkisi

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To the Editor,

The healthcare sector has been impacted by the COVID-19 outbreak. The prevention of COVID-19 infections was given priority, and personnel and resources for the healthcare industry were reassigned. How the COVID-19 pandemic might impact common screening practices in public healthcare is an intriguing subject. Prior studies have amply demonstrated the value of regular cancer screening and cervical cancer screening[1-2]. Alternative cancer screening methods are used in addition to the standard public health laboratory tests in different parts of the world, depending on the problem that is present at that area.

I Iodine deficiency is still a very common congenital endocrinal disorder problem in many parts of the world, particularly Southeast Asia[3-5]. The problem of congenital hypothyroidism requires urgent management via early detection to prevent unwanted permanent damage among affected children. The screening, as early as possible is required and it should be accompanied with the iodine supplementation[3-5]. A key component that serves as a barometer for the program's effectiveness in terms of public health implementation is its coverage[4]. In many remote places, prenatal diagnosis, treatment, and comprehensive care remain significant obstacles[6]. Thailand reports the first COVID-19 case in the area in 2020. Following that, the COVID-19 virus spreads rapidly throughout Indochina. Standard medical care's impacts are an intriguing subject that is rarely mentioned. The COVID-19 pandemic, according to the authors of this study, had an impact on antenatal urine iodine screening programs in regions where iodine insufficiency is a significant issue.

In Region 7, a rural area of an Indochina country, the research is being conducted (GPS location 15.995119, 103.717805). It is located about 500 kilometers from the capital. This area is divided into four rural landlocked provinces. This location may be found in an area with a high rate of iodine deficiency[7–11]. Congenital hypothyroidism affects 1 in 2238 live births, according to research[8]. Prenatal screening is a well-liked strategy that is acknowledged as an effective way to treat a number of illnesses, including genetic and metabolic issues. According to study, congenital hypothyroidism affects 1 in 2238 live births[8]. According to the local public health policy, the urine iodine test at the first antenatal clinic visit is the routine urine iodine screening test[12–14]. In chronological order, this is COVID-19's second invasion of the planet. Following the initial COVID-19 outbreaks' identification in January 2020, more outbreaks happened in waves. In the nation, the illness has already infected millions of individuals. The disease is still present today because efforts to contain it have been unsuccessful. Retrospective data analysis is done using the primary data, which was

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received from a public source (https://spbo3.moph.go.th/ket/wp-content/uploads/2022/06/4.%E0%B8%81%E0%B8%A5%E0%B8%B8%E0%B9%88%E0%B8%A1%E0%B8%A7%E0%B8%B1%E0%B8%A2.pdf). The average level for each year is directly compared. Simple arithmetic is used to compare it. The significance test is meaningless because no statistical comparisons, hypothesis tests, or analytical statistical approaches have been applied. The analysis of the data spans the time before COVID-19 debuted until 2021, when COVID-19 began to affect the study environment. Informed consent and ethical approval are not necessary for this retrospective analysis of data that is open to the public because there are no direct human or animal participants. The authors also reassess the statistics on the proportion of cases that undergo confirmatory laboratory tests following a positive screening result. It is done using a comparison similar to the one that was previously utilized for the examination of screening program data. Information on the prenatal urine iodine screening program between 2017 and 2021 is provided in Table 1 of the study. A trend in decreasing of average urine iodine level after COVID-19 attack. The magnitude of decreasing per year is about 11.25 ug/l.

Table 1. Data on average urine iodine level of pregnant women according to the screening program

Year	Average level (ug/l)	Change (%)
2017	181.2	N/A
2018	181.7	+ 0.5
2019	182.9	+ 1.2
2020	161.1	- 21.8
2021	160,4	- 0.7

* After COVID-19 appeared in 2010, the lockdown policy was put into place, and it wasn't cancelled until 2021.

Iodine insufficiency is a serious clinical hematological disease. This disease is extremely endemic in many parts of the world, particularly in Indochina[3–4,7-9]. Due to the increasing occurrence of diseases, the local public health policy is necessary for problem management. To prevent additional problem, the current strategy is to identify problems early. The premarital exam might be a smart move. It becomes sense to evaluate pregnant women for iodine shortage as this condition can also result in neonatal hypothyroidism. Given the undeniable advantages of medication, it is more likely that a better outcome will occur if thyroid dysfunction is identified before or as early in gestation as feasible[12-14]. A steady shift in view has occurred toward universal TSH screening of all women as soon as is practical in pregnancy due to the constraints of focused case detection in women at risk of subclinical hypothyroidism[12-15].

It's interesting that the reducing rate following COIVD-19 has a sizable positive impact on public health. The amount of the reduction is bigger and reflects the heavier negative impact caused by the COVID-19 pandemic when contrasted to the increase rate brought on by public health promotion. The lockdown strategy associated to the pandemic has a significant impact on the average level of urine iodine among local pregnant women. The normal intake of iodine and access to iodine source might be problematic during the lockdown period. Further studies to assess the exact cause is needed.

This research is among the early studies that we are aware of on how the COVID-19 pandemic has affected the nutritional issue of iodine shortage. This observation's knowledge can be used to address the COVID-19 pandemic continuum and other potential future issues. The current study is retrospective in nature and concentrates on a particular standard for how frequently clinical laboratory tests are performed. The likelihood of other originating variables, such as the recently discovered SARS-Co-V2 variant, the availability of the COVID-19 vaccine, and alterations in local socioeconomic and political situations, is a noteworthy limitation of the current study. In conclusion, the routine urine iodine screening program in the research environment was impacted by the COVID-19 pandemic, and the decreased coverage is a critical issue that has to be addressed.

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