Gmail **Ardiana Ekawanti <ekawantimuhaimin@gmail.com>**

Fwd: Krisnayanti - design draft

1 message

Dewi Krisnayanti <bdewi.krisnayanti@gmail.com> Wed, Nov 18, 2015 at 7:36 PM
To: Ardiana Ekawanti <ekawantimuhaimin@gmail.com>

Bu Eka,

Ini final draft dari Blacksmith untuk kita baca bersama. Sebelum draft ini dan setelah perbaikan terakhir, saya 3 kali dikirimkan hasil editing dari editor untuk memperbaiki hal-hal kecil, termasuk perbaikan daftar pustaka.
Mohon bantuannya untuk mencek final manuscript ini segera ya.
Karena kalo saya yang baca sendiri beberapa kali, ndak ketahuan salahnya dimana..hehehe.
Silahkan gunakan manuscript final ini untuk Monev besok.

Terima kasih,
Dewi

---------- Forwarded message ----------
From: **Sandy Page-Cook** <sandy@blacksmithinstitute.org>
Date: Tue, Nov 17, 2015 at 11:47 PM
Subject: Krisnayanti - design draft
To: Dewi Krisnayanti <bdewi.krisnayanti@gmail.com>

Hello Dewi,

Attached is the first design draft of your manuscript for JH&P.

Please review it carefully and let me know asap if there are any changes that need to be made. Please note that we cannot make substantive changes to the content at this point, just correct small errors in presentation.

Many thanks,

Sandy

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885K

Gmail **Ardiana Ekawanti <ekawantimuhaimin@gmail.com>**

Manuscript revised

1 message

Ardiana Ekawanti <ekawantimuhaimin@gmail.com> Tue, Oct 20, 2015 at 10:57 AM
To: Dewi Krisnayanti <bdewi.krisnayanti@gmail.com>

dear bu Dewi,

Bu berikut saya kirim revisi saya dalam highlight warna ungu, mohon koreksinya. Maaf saya terlambat menyerahkan, dua hari ini saya collaps.Saya mohon dikabari kalau masih ada yang dikoreksi. Terima kasih.

Salam,
Eka.

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Effect of mercury exposure on renal function and hematological parameters among artisanal small-scale gold miners at Sekotong, West Lombok, Indonesia

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Abstract

Background

Mercury is a toxic metal with effects on human health ranging from acute to chronic in a very short time of exposure. Artisanal small-scale gold mining (ASGM) is the main source of direct human exposure to mercury. Human exposure to mercury (Hg) can occur through both direct inhalation of mercury vapor and consumption of material taken from contaminated areas. To protect the health of ASGM workers and surrounding communities, a health assessment of mercury exposure and its effects is urgently needed. However, analysis of hair and urine samples as a proof test for mercury toxicity is very expensive. Therefore other tests must be considered to identify the first symptoms of mercury toxicity on miners and the surrounding community.

Objectives

The present study aimed to determine the effects of mercury exposure on renal function along with the hematological parameters of gold miners and the community as a first indication of mercury exposure symptoms.

Methods

The study was designed as a purposive field sampling study and was conducted in 3 main villages in Sekotong District, West Lombok Regency, West Nusa Tenggara Province, Indonesia. The 100 subjects were miners that have been exposed to mercury for at least 5 years and their wives and children (non-miners) who lived around the gold processing area. Blood and urine samples were then obtained from the subjects. The miners and non-miners were questioned about their mercury exposure over the previous 5 years, duration of exposure, and how mercury was handled in their daily life. Blood and urine samples were collected at the time of the study, around 10 ml of urine and 0.1 ml of blood (2 drops) were collected per subject. In order to determine the parallel results between the blood-urine and hair results, hair from the miners was collected at a different time for analysis[1]

Results

The results showed that the subjects had low proteinuria, hemoglobin and hematocrit concentrations as a consequence of chronic mercury intoxication. This finding was parallel with results of high mercury concentrations in urine (>7-273.3 µg/l) and miners' hair (>1-12.93 µg/g). Miners and non-miners in the exposure area were found to have proteinuria levels of more than 0.3 g/L. Proteinuria (≥0.3 g/L) was observed in 92.6% of miners and 72.4% of non-miners.

Conclusions

The results of the present study suggest that the test can be used to detect symptoms of mercury toxicity. <- define exactly what this test is exactly suggest that urinalysis (especially proteinuria) and hemoglobin value can be used as screening test to detect renal impairment of mercury intoxication. (urinalisis (khususnya nilai proteinuria) dan kadar hemoglobin dapat digunakan sebagai test penyaring kerusakan ginjal pada intoksikasi Hg)

Key words: *ASGM, Proteinuria, Hemoglobin, Hematocrit*

Introduction

Artisanal small-scale gold mining (ASGM) activities in West Nusa Tenggara (WNT) province began in mid-2009 and mercury amalgamation has been the most common method used to recover gold. Besides the availability of mercury, this technique is widely used because it is considered to be efficient, effective and affordable (Krisnayanti, et al., 2012)[1]. In Indonesia, at least 250,000 miners were estimated to be directly involved in more than 1,000 areas of ASGM, spread throughout the country[2]. This report quantified 713 locations of illegal small-scale mining throughout Sumatra, Java, Kalimantan and Sulawesi[2]. In addition, there are around 300,000 to 500,000 people affected by the ASGM activities, the majority of which are non-registered, informal operations located in remote areas in Indonesia[30]. In Lombok Island alone, in 2012 there were around 22,500 people estimated to be involved in this activity[31].

The amalgamation method of ASGM results in mercury emissions that get into the environment in several ways. Mercury is unintentionally or intentionally spilled onto the ground or agriculture land. Atmospheric transport and deposition at normal temperature is another common way for Hg to enter many water systems. In addition, Hg is often discharged together with other wastes into inadequate tailings ponds, or directly disposed into rivers and water systems. Moreover, when purifying the amalgam by burning, vaporized Hg is released into the atmosphere.[3] In addition, mercury gets into the human body through the food chain when fish are eaten or used in agricultural products.[4,5,6] Many studies have shown that mercury emissions into the environment affect human health.[7,8,9,10,11]

Mercury is a highly toxic metal that directly affects the nervous and cardiovascular system. Nausea, vomiting, diarrhea and severe kidney damage may occur due to exposure to high doses of mercury over a short period of time. Hallucination, memory loss, nerve damage and the inability to concentrate can also occur. Furthermore, mercury toxicity symptoms include tremors, loss of dermal sensitivity, and slurred speech.[12,13]

Mercury exposure can also come through inhalation of inorganic metallic mercury, ingestion of inorganic complexed mercury, or ingestion of organic forms of mercury. The factors regarding the occurrence and severity effects of mercury on human health include: the chemical form and dose of mercury; the age or the developmental stage of the person exposed, and the duration and exposure route, including inhalation, ingestion, and dermal contact. Fish consumption patterns can also increase the chance of mercury exposure when fish and seafood are contaminated with mercury. Mercury toxicity interferes with vital body systems: the nervous system, kidney function, and cardiovascular system. It has been reported that the development of the fetal nervous system is of high risk to the toxic effects of mercury. Other systems that may be affected by mercury toxicity are the respiratory, gastrointestinal, hematologic, immune, and reproductive systems. Following exposure to elemental mercury and methylmercury, kidney damage is the end-point of exposure to inorganic mercury compounds. Exposure damages the secretory organ of erythropoietin-a hormone that stimulates erythrocyte synthesis in the kidney. As kidney function declines, this affects the amount of red blood cells.[3,9,14,15] In addition, the developing nervous system has been identified as the most sensitive toxicological endpoint. [3, 9, 10, 15]

Since mercury vapor is easily absorbed into the human body, an assessment of miners and people living in the vicinity of ASGM is urgently needed. However, in Indonesia, the analysis of hair and urine samples as a proof test for total mercury toxicity is expensive, as few laboratories are able to analyze total mercury or even methylmercury. Based on the authors' experience, samples must be sent to a laboratory out of West Nusa Tenggara Province or even overseas. Hence, other tests must be considered to identify the first symptoms of mercury toxicity among miners and the surrounding community. Bose-O'Reilly et al. (2010) recommended four neuropsychological tests to assess memory and motor function problems in ASGM miners. A physical was aimed at identifying neurologic disturbances such as ataxia, tremor and coordination problems related to the neurotoxic effects of mercury. Furthermore, preliminary symptoms of mercury exposure can be determined by examining kidney function through a simple urine test and hemoglobin level can be assessed with a simple blood test kit. Holmes, et al. 2009 reported that there was an increased level of excretion of low molecular weight proteins in urine from ASGM workers of as low as 5–10 μg Hg/g creatinine. <-Are these units correct? (μg/g creatinine) These creatinine levels were only slightly above those found in the general population. Even though this level was only slightly higher than normal, the significance of such changes in renal excretory profile is of toxicological importance. Furthermore, mercury ingested or inhaled as elemental mercury binds to structural protein-hemoglobin and causes impairment in the erythrocyte function of oxygen carrying capacity and induces hemolysis. Both mechanisms could cause decreases in either hemoglobin or hematocrit levels.[18] These findings could be used to take further action for workers and the entire community in the vicinity of ASGM. This study aimed to determine the association between mercury exposure, renal function and hematological parameters of gold miners and the surrounding community as a first indication of mercury exposure symptoms.

Materials and Methods

Study Location

The research was conducted at Sekotong ASGM, West Lombok Regency, West Nusa Tenggara Province, Indonesia (Figure 1). The subjects were miners and families from 3 different villages: Sekotong Tengah, Tawun and Pelangan. The villages were the main gates to the mining sites.

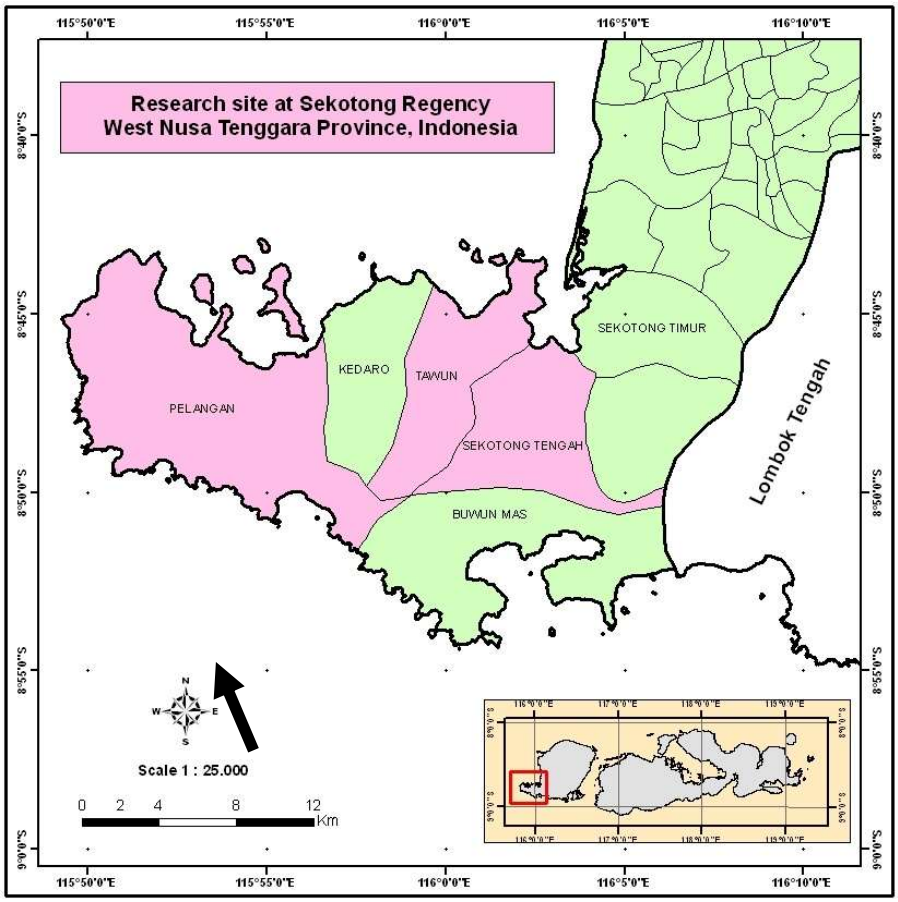

Figure 1. The study site at Sekotong District West Nusa Tenggara Province.

Sample Collection and Preparation

The samples were tested using a non-probability sampling technique (purposive sampling) by collecting 33 samples in each village, and in total, 100 people were recruited from the 3 villages. The subject criteria were: 1) miners who had been mining and using mercury for at least 5 years; and 2) non-miners, including wives and children, who had lived in the gold processing area for at least one year. Before conducting the study, ethical clearance was obtained from the Ethical Code Board of the Medical Faculty, University of Mataram, Indonesia, where subjects were asked to sign an informed consent form in order to be involved in this study. Blood and urine samples were then obtained from the miners and non-miners. Following the study procedure, the miners and non-miners were questioned about their mercury exposure over the previous 5 years, duration of exposure, and how mercury was handled in their daily life. Blood and urine samples were collected at the time of the study, around 10 ml of urine and 0.1 ml of blood (2 drops) were collected per subject. In order to determine the parallel results between the blood-urine and hair results, hair from the miners was collected at a different time for analysis[1].

Sample Analysis

Proteinuria was assessed immediately upon collection, but urine was stored at -4˚C until analysis. Proteinuria level was assessed using dip-stick urinalysis and the results were stated as g/L. The hemoglobin and hematocrit via capillary blood sample were assessed using a hemoglobinometer and stated as mg/dL.

For determining the parallel results of proteinuria and hemoglobin and hematocrit, some of the miners' hair and urine samples were analyzed. Analysis of the hair samples was performed at State Key Laboratory of Environmental Geochemistry in Guiyang, China[1]. Hair samples for total mercury examination were directly assessed using a Lumex RA915+ mercury analyzer. The detection limit of the instrument was 0.2-5 ng g^{-1}. The urine samples were directly collected, and placed and sealed in a polyethylene container and kept in the freezer at -20ºC until transport to the laboratory of the Institute and Outpatient Clinic for Occupational, Social and Environmental Medicine in Munich, Germany. The analysis of mercury in urine was performed with cold-vapor atomic absorption spectrometry and the determination limit was 0.25 µg/l[7]. Blood and urine data were analyzed using descriptive statistical methods and Spearman's correlation test. It was found that after a short time (4 years) of mercury exposure, the concentration of total Hg in miners' hair[1,6] and urine from Sekotong ASGM were above the World Health Organization (WHO) standard[4,6].

Results and Discussion

Characteristic of research participants

This research involved one hundred ASGM workers and their family, the characteristics of whom are shown in Table 1.

Table 1. Characteristics of research participants

Characteristics	Percentage (%)
Sex	
• Male	75
• Female	25
Age (year)	
• <18	10
• 18-60	85
• >60	5
Occupation	
• Miner (directly exposed)	71
• Non-miner (indirectly exposed)	29
Duration of exposure (years)	
Mean	5.5
• <1 (n=0)	0
• 1-5 (n=54)	53
• 6-10 (n=4)	47
• >10 (n=1)	0

Table 1 shows that most participants were male (75%), and 90% were adults and 10% were children. Most participants were miners (71%) working in processes such as

amalgamation, cyanidation, and smelting. Hence, they were directly exposed to mercury. Non-miners, the family of miners (wives and children), were considered to be indirectly exposed to mercury, as they lived in the vicinity of the smelting process within a radius of less than 500 m. Their duration of exposure was more than five years (mean=5.4 years).

Table 2. Characteristics of proteinuria and hematological parameters

Parameter	Level			
	Minimum	Maximum	Mean±SD	Median
Proteinuria	1.0	3.0	2.0	2.0
Level of protein in urine (g/L)	1.0	3.0	1.6±1.0	1.0
Hemoglobin (g/dL)				
Male	7.3	25.0	12.9±2.7	12.7
Female	9.6	16.9	13.1±1.5	13.0
Hematocrit (%)	21.9	75.0	38.9±7.3	38.4
Urine mercury level (µg/L)	2.6	178.1	41.0±52.2	19.3
Hair mercury level (ppm)	0.0	6.6	2.6±1.7	2.2

Data shown in Table 2 were resumed of all parameters measured in this research. <- what is meant by this? Data shown in table 2 resumed of parameters (urinalysis, haemoglobin, total mercury in hair and urine) measured in this research. Protein was assessed qualitatively using the dip-stick method and was categorized as negative, trace, +1, +2, +3, or +4 and quantitatively valued as negative, <0.3 g/L, 0.3 g/L, 1 g/L , 3g/L, and >20 g/L. The average amount of protein in urine was 1.56±1.03 g/L (mean±SD). This was considered to indicate proteinuria since this level was higher than 300 mg/L (0.3 g/L). The mean value of hemoglobin (Hb) found in men (12.9±2.68 g/dL) was lower than in women (13.11±1.45 g/dL). The mean hematocrit value was 38.95±7.27%, and mercury levels in urine and hair were 41.04±52.19 µg/L and 2.56±1.71 ppm, respectively.

Table 3. Proteinuria profile in Sekotong area ASGMs

Proteinuria (g/L)	Percentage (%)
Miners	
0	0
<0.3	0
0.3	7
1	56.3
3	36.3
≥20	0
Non-miners	
0	0
<0.3	0
0.3	27.6
1	48.3
3	24.1
≥20	0

Miners and non-miners in the exposure area were found to have proteinuria levels of more than 0.3 g/L. Proteinuria (≥0.3 g/L) was observed in 92.6% of miners and 72.4% of non-miners.

Table 4. Hemoglobin and hematocrit levels of subjects in Sekotong area ASGMs

Hb level group	Percentage (%)	HCT percentage	Percentage
Miner		Miner	
<13 g/dL	57.7	<40%	67.6
≥13 g/dL	42.3	40-50%	28.2
Smoking		≥50%	4.2
<13.3g/dL	67.6		
≥13.3g/dL	32.4		
		Non-miner	
Non-miner		<40%	51.7
<12 g/dL	13.8	40-50%	41.4
≥12 g/dL	86.2	≥50%	6.9

Table 4 indicates that most of the miners suffered from anemia (57.7%), as the cut-off point for this value was 13 g/dL, as they were predominately male. If the smoking reference value for anemia cut-off value (13.3 g/dL) was considered, 67.6% of the miners were anemic. The results also showed that Hb values for non-miners were predominantly normal, as only 13.8% suffered from anemia. <- Please double-check this text (Tabel 4 menggambarkan bahwa sebagian besar penambang menderita anema (57,7%) dengan nilai batas normal Hb 13 g/dL untuk laki-laki. Jika kita meggunakan nilai batas normal Hb untuk perokok yang berjenis kelamin laki-laki maka nilai normalnya menjadi 13,3 g/dL, dengan nilai batas ini, maka persentase jumlah penambang yang mengalami anemia menjadi 67,7%. Hasil dalam table juga memperlihatkan kadar Hb untuk non penambang sebagian besar normal, hanya 13,8% yang menderita anemia.(Bu saya tuliskan dalam Bahasa Indonesia maksud saya, mungkin bahasanya terlalu ruwet sehingga sulit dimengerti, minta tolong bu dewi menyederhanakannya)

Table 5. Correlation between exposure group and urine protein level, Hb, HCT, urine and hair mercury levels

Exposure Group	Urine protein level (g/L)	Hemoglobin (g/dL)	Hematocrit (%)	Urine Mercury Level (µg/L)	Hair Mercury Level (ppm)
Miners Non-miners	1.68±1.023 1.29±1.03	12.74±2.39 13.59±2.43	38.21±7.18 40.77±7.29	69.39±62.41 12.7±11.50	2.77±1.68 2.37±1.82
Spearman's rho (ρ); coefficient correlation	0.031; -0.216	0.045; 0.201	0.045; 0.201	0.042; -0.550	0.517;-0.169
Kruskal Wallis Test	0.032	0.045	0.045	0.047	0.500

Table 5 illustrates the correlations between mercury exposure and several health parameters such as urine protein level, Hb, HCT, urine and hair mercury levels in two

different mercury exposure groups, miners and non-miners. Spearman's correlation test and the Kruskal Wallis test were performed to confirm the relationships between the miners and non-miners and health parameters. Table 5 shows that miners and non-miners showed significant differences in all health parameters ($p<0.05$ Kruskal Wallis test and $\rho<0.05$ Spearman's test) except for hair mercury value, which showed no significant difference between the miners and non-miners.

Discussion

All participants in the present study were directly exposed to mercury, either as workers (miners) or as family members (non-miners) living in the contaminated atmosphere, water, food stuff and soil in the vicinity of the mining activities. Most participants were directly exposed to mercury, as they worked in the cyanidation process, since this process often proceeded <-used? sludge from the amalgamation method which involves mercury.

Some study subjects were children that had direct contact with mercury from mercury panning after school and standing in close proximity to burning processes. This type of child activity has also been reported[7] in other gold mining areas. Most of the women were of reproductive age, which means that their pregnancies were also at risk, as mercury affect intrauterine growth development, especially brain development.[3,19,20]. The duration of exposure to mercury contaminants was an average of 5.4 years. This period was much shorter than the 14.8 years needed to show specific clinical manifestations in previous reports.[9] This manifestation is affected by the type and dose of mercury, the age or developmental stage, duration of exposure and route of exposure.[3] A weakness of the present study was that there was no identification of the dose and type of mercury exposure.

Protein levels in urine were obtained by converting the qualitative proteinuria dip-stick results categorized as negative, trace, +1, +2, +3, +4 to quantitative values of 0 g/L, <0.3 g/L, 0.3 g/L, 1 g/L and ≥20 g/L, respectively. Proteinuria was identified by results of +2 and ≥ 0.3 g/L[21]. Almost all of the subjects in the exposed areas, both miners and non-miners, were positive for proteinuria (miners 92.6% and non-miners 72.4%). This result was similar to findings of proteinuria in patients exposed to products containing mercury[22]. In addition, proteinuria is a clinical manifestation of mercury intoxication with elemental, inorganic and ethyl-mercury[15]. High urinary (69.39±62.41µg/L) and hair (2.77±1.68) units? Ppm mercury levels in the miners indicate that a pathological process in the kidney may occur due to mercury exposure. Common causes of urinary mercury excretion were elemental[23] and organic mercury exposure (Burbure, 2005), as miners were directly exposed to mercury vapor during the smelting process. Once inhaled, mercury vapor is dispersed rapidly into the blood and might deposit in other organs e.g. brain, kidney, placenta thyroid and others[5,9]. Significant differences in urinary levels between miners and non-miners indicate that a possible route of exposure may be ingestion of inorganic mercury through contaminated food[1] or water. In the study location, most of the water sources for amalgamation processes and daily life come from the same well, and often the tailing ponds are nearby the well. Although both groups were directly exposed to mercury, the level of mercury (urinary and hair samples) for the miners group was higher than for non-miners. One contributing factor in this case was smoking habit[11], as all miners were smokers, and the urinary mercury level of this group was more than five times higher than that of non-miners.

Persistent proteinuria indicates kidney disease and the most common impacts of this condition are diabetes, hypertension, obesity and medicine or chemical substances.[24] One of the chemical substances that affects proteinuria is mercury[23], and to confirm this, repeated tests are required. People with consistent positive results can be categorized as having

persistent proteinuria and considered to have kidney disease. A weakness of the present study was that there were no repeated tests to confirm persistent proteinuria. Assessment of renal function is needed in future studies.

The mean of the hemoglobin concentration of miners (12.74±2.39 g/dL) was lower than that of either non-miners (13.59±2.43 g/dL) or the normal value for men (13-18 g/dL)[4]. The results of this study also indicated a correlation between the smoking habits of miners and hemoglobin concentration. Since all of the miners were smokers, if a correction factor for smoking (0.3) is used, hemoglobin concentrations would seem to fall in the normal range, however, the normal value for smokers would increase as well. <- uncertain of wording here (Maksud saya begini bu : Karena semua penambang adalah perokok, maka nilai Hb di atas harus ditambahkan factor koreksi sebesar 0,3; sehingga nilai Hb akan menjadi (13,04±2.39 g/dL) yang tampaknya normal untuk laki-laki. Akan tetapi jika kita menggunakan nilai batas normal untuk perokok yaitu 13,3 g/dL, maka Hb penambang tersebut menjadi lebih rendah dari batas normal.) Hemoglobin concentration is affected by many factors such as high altitude, diet, pregnancy and smoking.[25] Since the Sekotong mining sites are in the lowlands, subjects were not pregnant and had a homogenous diet, the remaining factors influencing Hb values were smoking and mercury exposure (route and magnitude). This finding was similar to that of previous studies reporting that mercury exposure could decrease hemoglobin levels[18,26]. The mechanisms behind the decrease in Hb through mercury exposure are not only due to decreasing renal function, but also due to the influence on iron metabolism[27] and haemolysis[14,28]. To examine the iron metabolism factor, iron transfer and ferritin serum must be assessed, which was not performed in the present study. The Hb values and Hct concentration of miners (38.21±7.18%) were lower than that of non-miners (40.77±7.29%) as well as the normal value (40-50%). Hematocrit reflects the cell and plasma proportions, and low Hb is a direct consequence of low Hct. <-please check that I have kept your meaning here (low Hb usually found in low Hct and vice versa)

Except for hair mercury level, all parameters measured in the present study showed significant differences between the two groups. The subjects in the miner group were men, and most subjects in the non-miner group were women. The results of the present study differed from those of previous reports[22] that found that mercury in men's hair was higher than that in women's.

Conclusion

After five years of exposure to mercury, people in Sekotong area ASGMs, both miners and non-miners, showed proteinuria and low hemoglobin and hematocrit concentrations due to chronic mercury intoxication as indicated by high urinary and hair mercury levels.

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Gmail **Ardiana Ekawanti <ekawantimuhaimin@gmail.com>**

Fwd: Your Submission

2 messages

Dewi Krisnayanti <bdewi.krisnayanti@gmail.com> Tue, Oct 6, 2015 at 1:06 AM
To: Ardiana Ekawanti <ekawantimuhaimin@gmail.com>

Ini bu, email dari JH&P.
Bisa sebagai bukti laporan untuk monev.
---------- Forwarded message ----------
From: **JH&P** <em@editorialmanager.com>
Date: Mon, Oct 5, 2015 at 3:30 AM
Subject: Your Submission
To: Baiq Dewi Krisnayanti <bdewi.krisnayanti@gmail.com>

Ref.: Ms. No. JHP-2015-6R2
Mercury exposure effect on renal function and haematological parameter from Artisanal Small-Scale Gold Miners at Sekotong, West Lombok, Indonesia
Journal of Health and Pollution

Dear Dr Krisnayanti,

I am pleased to tell you that your work has now been accepted for publication in Journal of Health and Pollution. Congratulations!

It was accepted on Oct 04, 2015

Your manuscript will now go to copyediting, then design and we will communicate via email from this point on.

Comments from the Editor and Reviewers can be found below.

Thank you for submitting your work to this journal.

With kind regards,

Sandy Page-Cook, MPH
Managing Editor
Journal of Health and Pollution

Comments from the Editors and Reviewers:

Ardiana Ekawanti <ekawantimuhaimin@gmail.com> Thu, Oct 8, 2015 at 12:48 PM
To: Dewi Krisnayanti <bdewi.krisnayanti@gmail.com>

Monevnya sudah selesai bu, mohon maaf kita dapat skor 630. Menurut penjelasan ka lemlit tidak ada lagi monev eksternal, jadi nilai monev internal ini nanti langsung dikompilasi dengan satu penilai dari luar.
[Quoted text hidden]

Gmail **Ardiana Ekawanti <ekawantimuhaimin@gmail.com>**

JHP revision

1 message

Ardiana Ekawanti <ekawantimuhaimin@gmail.com> Mon, Nov 23, 2015 at 12:17 PM
To: Dewi Krisnayanti <bdewi.krisnayanti@gmail.com>

Dear bu dewi,

Bu, saya attach file word yang isinya revisi beberapa redaksi di draft jurnal. Terima kasih.

NOTE FOR REVISION.docx
30K

NOTE FOR REVISION

1. Page 7: In Abstract methods line 22 -→ 1 should be omitted (citation should not be in abstract)
2. Page 8 : Abbreviation -→ Hg should be Hydrargyrum (mercury)
3. Page 9 :
   - Sample collection and preparation line 1 tested should be reqruited
   - Sample analysis line 3: should be added after ….analysis for mercury.
4. Page 10 :
   - Table 2 Characteristic of Proteinuria, Urine mercury and haematological parameter
   - Line 2 Missed . before blood
5. Page 11
   - Table 4 : HB should be Hb
   - Table 4 : JCT should be HCT